2001

An Approach to Family Literacy in the Highlands of Bolivia: An Ongoing Experience with Aymara Families

Jenny Perez-Genge
University of Massachusetts Amherst

AN APPROACH TO FAMILY LITERACY IN THE HIGHLANDS OF BOLIVIA: AN ONGOING EXPERIENCE WITH AYMARA FAMILIES

A Thesis Presented

by

JENNY PEREZ-GENGE

Submitted to the Center for International Education of the
University of Massachusetts Amherst in partial fulfillment
Of the requirements for the degree of

MASTER OF EDUCATION

February 2001

School of Education

DEDICATION

To my dear husband Cole D. Genge
and to the
Aymara Families who participated in the study

ABSTRACT

AN APPROACH TO FAMILY LITERACY IN THE HIGHLANDS OF BOLIVIA: AN ONGOING EXPERIENCE WITH AYMARA FAMILIES

FEBRUARY 2001

JENNY PEREZ - GENGE, B.A., UNIVERSIDAD CATOLICA DE COLOMBIA

M.Ed., UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Dr. Robert J. Miltz

The people of the *altiplano* (Andean highland plateau at around 13,000 feet above sea level) are the epitome of physical strength, ancient wisdom, and tenacity of character. They are the Aymara and Quechua people, descendants of the Inca and Tiahuanacota cultures; they live in one of the highest permanently inhabited areas on earth and have blossomed from their ancient heritage. Although the imminent impact of western and contemporary influences are at their doorstep, both the Aymaras and Quechuas struggle patiently to strengthen their cultural traditions.

Aymara family traditions revolve around the chacra, the main agricultural unit for survival on the isolated altiplano where they raise llamas and sheep according to the seasonal calendar. Fathers, mothers and children are involved in the multiple tasks associated with daily living, which leaves little time for promoting school activities. Not surprisingly, few are the relative number of children who go to school on a regular basis, added to this is the glaring scarcity of schools in rural Bolivia. Today, however, rural families face a great dilemma, on the one hand, through contact with the Western world they realize that formal education is becoming a springboard for surviving in a modern world where they are a part of already; and on the other hand, they do not have the tools to deal with educational issues the western world has introduced such as literacy, vocational education, etc.

This study is part on an ongoing project with Aymara families from several communities of the province of Tapacari in the department of Cochabamba, Bolivia. The study approaches the world of education as a means of systematically promoting indigenous knowledge and literacy. The families involved in the project are open to exploring alternative learning modalities including non-formal education. Encouraged by several Aymara families' willingness to learn, the Family Literacy Program was born in 1997 by defining two basic levels of actions: first, understanding early childhood development and second, exploring learning avenues for adult education. My participation in the project focuses on the development of the overall design of the family literacy program and on the training of the facilitators and community workers from the NGO that runs the project.

TABLE OF CONTENTS

LIST OF TABLES

Chapter 1

Introduction

The people of the *altiplano* (Andean highland plateau at around 13,000 feet above sea level) are the epitome of physical strength, ancient wisdom, and tenacity of character. They are the Aymara and Quechua people, descendants of the Inca and Tiahuanacota cultures; they live in one of the highest permanently inhabited areas on earth and have blossomed from their ancient heritage. Although the imminent impact of western and contemporary influences are at their doorstep, both the Aymaras and Quechuas struggle patiently to strengthen their cultural traditions.

Aymara family traditions revolve around the chacra, the main agricultural unit for survival on the isolated altiplano where they raise llamas and sheep according to the seasonal calendar. Fathers, mothers and children are involved in the multiple tasks associated with daily living, which leaves little time for promoting school activities. Not surprisingly, few are the relative number of children who go to school on a regular basis, added to this is the glaring scarcity of schools in rural Bolivia. Today, however, rural families face a great dilemma, on the one hand, through contact with the Western world they realize that formal education is becoming a springboard for surviving in a modern world where they are a part of already; and on the other hand, they do not have the tools to deal with educational issues the western world has introduced such as literacy, vocational education, etc.

This study is part on an ongoing project with Aymara families from several communities of the province of Tapacari in the department of Cochabamba, Bolivia. The study approaches the world of education as a means of systematically promoting indigenous knowledge and literacy. The families involved in the project are open to exploring alternative learning modalities including non-formal education. Encouraged by several Aymara families' willingness to learn, the Family Literacy Program was born in 1997 by defining two basic levels of actions: first, understanding early childhood development and second, exploring learning avenues for adult education.

My participation in the project focuses on the development of the overall design of the family literacy program and on the training of the facilitators and community workers from the NGO that runs the project.

A. The Problem

Several families from communities of the province of Tapacari (Pasto Grande, Mujlli, Yauritotora, Kullpana and Jachapampa) in the Department of Cochabamba, Bolivia along with facilitators of CEADB (Dorothy Baker Environmental Studies Center), a local NGO - funded by a Bolivian umbrella organization called FUNDESIB (Foundation for the Integral Development of Bolivia)[1] - have developed community initiatives in agriculture and education for the past twenty years. The families involved in the project expressed concerns over the poor performance of their children in school. The schoolteachers' reports, on the other hand, suggest children perform poorly in school for lack of intellectually stimulating learning environments at home in the early childhood stages of development and a lack of parental support with homework. Both parents and CEADB facilitators have discussed the need of spending more quality time with their children and learn activities that promote bonding, creativity and knowledge. They have also realized the importance of having access to the written world for both themselves and their children.

The Purpose of the Study

The purpose of this study is to describe a Family Literacy Program Design Model for the Aymara families in Bolivia. As Dixon and Cohen, (1996) point out, children are not the only family members who may require literacy skills as the case with the group of parents involved in this educational project that CEADB supports in the communities of the province of Tapacarí. The parents have expressed their interest on gaining knowledge in Spanish reading and writing skills as well as in parenting issues. Therefore, the purpose of this study is to develop a methodology for an integral

[1] FUNDESIB since 1982 has worked on local initiatives in three main areas: environmental studies, adult education and radio communications. Some of these initiatives are: water and soil conservation, appropriate technology research and application (fish farming, biogas, solar greenhouses), training for community development facilitators and public communication services. FUNDESIB makes networks with grassroots organizations and support efforts to develop their own communities as well as

learning process of family literacy (including parenting issues), which entails a non-formal education approach with activities to develop at home, in social spaces, and in the field crops[2].

Design of study

This study is framed as a qualitative research approach as proposed by several authors including Rossman and Rallis (1998), Marshall and Rossman (1999), and Creswell (1994). This phenomenological case study was conceived around the experiences of several Aymara parents and their children from the Cochabamba highland valley participate in a family literacy program based on parenting and early childhood issues. As a phenomenological study, this work attempts to search for the essence and meaning of a literacy experience (Creswell, 1998), the development of a learning methodology, and its implementation. As a case study, I examine the implementation of the program as a "case" that is bounded in a particular time period (June 1999 – August 2000) and place (Tapacari, Bolivia) while looking for multiple sources of information (library research in Bolivia and the United States) on family literacy in indigenous communities to provide an in-depth picture of the case.

My role in this ongoing project, as a researcher in non-formal education, is to define its program design, and to train the facilitators from the local NGO who run the program in its various phases. The procedures to develop this study include two phases: 1) Define the fundamentals and methodology of the program, and 2) Create a working manual and activities and train the facilitators. The first pahase is based on a three-month field trip to Bolivia from June to August 1999, in which I became acquainted with the social, economic, cultural and geographical context of the families involved in the project. In the first phase, I collected data based on informal conversations with both participating families and CEADB workers, through observations of the interactions between parents and children as well as with the written material (magazines, pamphlets, and illustrated books) that Fundesib is collecting for the project. The second phase

---

facilitates the exchange of knowledge, experience, resources, and in some instances, provides legal assistance.

[2] Traditionally Aymara parents and children who are able to work spend most of the day in the crop fields. The infants stay on the mother's back until they reach the first year of life. If an elderly (i.e. grandparents or great aunts) are unable to attend the youngsters at home, one of the older siblings stays at home to take care of them.

includes literature review in Bolivia and the United States, and the creation and development of the manual to implement in Bolivia during the months of June, July and August 2000. This phase also includes the writing report, which provides the essential unifying experience in the field along with a reflection process.

Significance of study

The origin of this educational project is the result of collective participation and discussions regarding the education of children and parental education, therefore it is mediated by the participant's daily life practice, and has no deadlines or goals that must be achieved in a certain time period. Another aspect to be highlighted is the participation of fathers and mothers as well as the support from their communities throughout the entire project. Given the family daily routines -that include children' work-[3], Aymara men and women are very busy, but the fact that both of them want to devote time to educational activities, it can be seen as a great achievement. For this to happen, families in the communities plan ahead taking turns to participate in meetings or trainings according to the seasonal calendar. The notion of involving all members of the nuclear family: fathers, mothers and children, goes in accordance with the Andean principle of mutual cooperation or *Ayni*[4].

There are three organizational aspects that make CEADB's project unique. The first is related to 25 years of accumulated experience with several Aymara communities in the region, resulting in an evolving relationship that has made possible to conduct a longitudinal study. The second aspect of this project is based on participatory research, given the participants themselves identified the need to initiate the process. The third aspect is the value of the potential impact of the project on participants who live in a desolated region and have little close contact with city populations.

Finally, this study is an exploration that combines family literacy practices and spiritual education within the context of Aymara cosmology that will contribute to the

[3] One of the main Aymara practices throughout the year is working in the *chacra* (the cultivating field or the place to grow animals). Fathers remove and prepare the soil while mothers plant the seeds. Fathers, mothers and children take care of the growing plants. In addition, raising and herding animals (llamas and sheep) are also family tasks.

[4] Represents a modality of the 'pleasure of giving' and is the site of solidarity and cooperation between the runas (persons), nature and the huacas (deities) so that life can flow.

understanding of the complexity of Aymara culture and its evolving trends and dynamics at the beginning of the 21st century.

Limitations of the Study

One limitation of this study is the fact it is a fragmentary portion of an ongoing project. The nature of my participation is limited to providing "technical support" in relation to family literacy, early childhood practices, and training techniques as needed and appropriate to the particular stage of the project. Providing "technical support" implies that once philosophical notions, materials, and techniques are "delivered" the technical involvement (in this case, my involvement) is complete. This situation could restrain me from further work and follow up activities such as improving, polishing or making appropriate changes to materials, techniques and approaches.

The language barrier is another limitation. Even though, the facilitators of the project and most of the men who participate in the project are bilingual, the majority of women speak only Aymara. Children speak Aymara as their native language but the ones who attend school have started to learn Spanish (since the school system is monolingual). A major research impediment for me was language and the fact I needed a translator in order to say anything both formally in presentations or informally in conversation speak Spanish but not Aymara. Therefore, the meetings and conversations with parents and workshops with facilitators needed Spanish and Aymara translations.

Another limitation or tension is the debate occurred between western approaches to education and pedagogy and the Aymara knowledge system and its practice. A challenge to face perhaps is the differentiation of constructions of meaning (i.e. the concept of discipline).

Organization of the Study

Chapter 1 is an introduction, which includes a statement of purpose, rationale, design of the study and its limitations. Chapter 2 situates the reader in the context of the Aymara world, focusing on the setting, the history, the language, education, the cosmovision, and some other important elements of the Aymara culture such as the sense of community, work, family, land and religion. Chapter 3 presents specific relevant studies, theories and general findings of the literature search. The organization

of the whole project and the description of my personal involvement in it, are described in Chapter 4. A brief discussion and analysis and some conclusions and themes for further inquiry are presented in Chapter 5.

Chapter 2

Contextual Background

The Aymara People of the Highlands of Bolivia

The purpose of this section is to provide the reader with a brief review of some of the characteristics of the Aymara people and their world. I will first present the setting that involves environmental aspects of the Aymara life, then I will provide a concise introduction to the historical background of the Aymara culture, followed by the origins of language and a summary of some issues of education in the Aymara setting, and to close this section I will focus on five distinctive elements of the Aymara culture: the sense of community, work, family, land and religion.

A. The Setting

The map in appendix 1 (refer to back of document) shows the region where some 1,600,000 Aymara people live, with the highest population densities around the Lake Titicaca area between Bolivia, Peru and Chile.

The highlands of Bolivia are one of the highest permanently inhabited areas on earth, the central altiplano is at 13,000 feet (4,000 meters) above sea level. Severe climatic conditions such as high solar intensity, freezing nights and constant wind make the landscape almost treeless, except for the areas that surround the lake. The predominant vegetation of most of the highlands or *altiplano* consists of grasses and shrubs. Water is scarce for more than half of the year with only 300 to 500 mm. of precipitation (Gareca, 1992), making agricultural ventures a challenging task.

The region is defined as a semiarid steppe with temperatures ranging between 6 ^{o}C and 14 ^{o}C, where relative annual humidity is 57 % with frequent cold and dry winds of varying intensity, while the number of frost days is around 150 a year mostly during the winter months though some come in the summer months as well (Canqui, 1990). Added to this, the soils are very poor. Cultivation is tough and reserved for extremely weather

resistant crops such as potato, quinua, broad bean, barley, and alfalfa as a permanent green fertilizer.

Agricultural practices during the pre-conquest period (pre-1524) were centered around communal lands worked by individual families with shared labor during the tough seeding and harvesting times, though most of the population lived in the more hummed regions of the altiplano, near lake Titicaca and feeder rivers and creeks. At that time, the use of raised field beds was a common practice and obtained highly productive crops. With the coming of the Spanish, all traditional forms of agriculture were eventually replaced by conventional plowing and soil turn over, a practice that over time caused tremendous irreversible soil erosion damage. Added to this came the impact of cattle and sheep on grasses that had evolved for camel-like animals such as the *llama*[5], the *alpaca*[6], the *vicuña*[7] and the *huanaco*[8] which are perfectly suited to the harsh environment of the altiplano. The New World camels could not withstand the grassing and trampling pressures that resulted from introduced species. These pressures lead to the formation of unnecessary desserts in an extremely fragile environment.

These land practices were common prior to the 19th century, and in fact, became even stricter between the mid of the 19th century and up to the mid the 20th century, which served a minuscule elite. The communal lands were turned into huge estates, and those living on them were made indentured servants to the land owner, often with little more than a small plot allotted to a whole family to grow everything the family would consume over the course of the year, most often at a heavy tax of 50 percent of anything produced (Genge, 1999). For the native people of the highlands, the effect of such a system over the centuries has created a sense of despair, incredulity, and of survival at whatever cost. Furthermore, the sacred notion of caring for *pacha mama* is increasingly

---

[5] Bred as animal of burden and for meat, llamas are willing to carry only about 25kg of cargo. Llamas can be distinguished from alpacas by their long ears (curved like parentheses), long legs and necks, and the cocky angle of their tails.

[6] Bred for their wool, and consequently have a much heavier fleece than llamas, with a characteristic 'apron' of wool bushing out from their chests. Their noses, legs and ears are shorter and more sheep-like than those of llamas.

[7] Reputed to have the finest wool of any animal, the vicuña was reserved for the Inca emperor himself. The animals were captured, shorn and then released. But after the conquest vicuñas were killed for wool, and the numbers declined to near-extinction. After careful protection the species has recovered and they are not uncommon in southern Peru an in Bolivia. It is a singularly beautiful little animal, slim and graceful with a golden coat and white underparts.

[8] Not often seen but unmistakable since it looks like a llama but with an orangey-brown coat shading to white on the underbelly.

perishing with the new generations who underestimate the traditional practices and favor the ones from global West space.

B. History

The history of the people of the Andes is abruptly divided into two parts, the pre- and post-colonial period. The Andean cultures before the Spaniards conquest are well known for the complexity of their cosmology and for their social organization and distribution of wealth, among others. During pre-Hispanic times, the Andean world was characterized by the diversity of ethnic groups, many of them with distinct languages and traditions. There were numerous migrations, conquests, expeditions and imperial expansions as well. The Inca empire is one of the best known, though it was only the last in a series of civilizations spanning over two thousand years, including the Wari, the Chavín and the Tiwanaku, prior to the Spanish conquest. (Llanque, 1990). The Inca empire was also known as the *Tawantinsuyu* -the four united parts- or provinces that straddled the Andean mountain range from modern-day southern Colombia to central Chile. This vast expanse was well organized and managed with a system of roads, irrigation systems, and grain storage facilities that enabled great mobilizations and exchanges of people over thousands of kilometers (Albó, 1988).

After the European conquest, history is tinged with abundant episodes of horror and injustice. Despite the clear differentiation of times, it is impossible to make a monolithic characterization of the inhabitants of the Andes, who extend from the green mountains of Ecuador through the higher lands of Peru, Bolivia and northern Chile. In Bolivia, there are two larger ancient cultures inhabiting the Andes, the Quechua and the Aymara. The present day, Andean communities retain part of their pre-conquest agricultural organization roots via the Ayllu[9]. The Ayllu is an extended family structure, which was paradoxically maintained by community organization during the feudal-like Hacienda system, from the 16th century into the Republican period. In the 20th century, the agricultural reform law approved in 1953, sought to re-evaluated the distribution of land, and thus breakdown the extreme differences between the landed gentry living in the cities and the poverty stricken rural peasantry. However, the reform turned out to be

[9] According to Apffel-Marglin with PRATEC (1996) Ayllu is "a local group of related persons, and other non-human beings of the locality, i.e. the *pacha*.

rich in rhetoric though impoverished in practice. A clever movement in the political machine run by the white and *mestizo* elite who supported the economic slavery of the native peoples, perpetuated since the colonial epoch, maintained the status quo and no significant or lasting changes have since been made in favor of the peasant majority (Genge, 1999).

The current situation for the majority of the Bolivian native peoples who are *campesinos* has not changed. With the global economic trends that started in the 1970s with the oil crisis, external debt, and implementation of orthodox neo-liberal policies have all contributed to increased poverty all across Latin America (Boron & Torres, 1996) and Bolivia is not an exception. These international and national issues had their toll at the grass roots level: economic downturn, massive layoffs of miners (the single largest formal labor force until then), stifling trade, and in addition a series of bad crop years in the early 1980s, all these only compounded existing issues for *campesinos* and city folk alike. Among the effects was a growing trend of country-city migration. According to Coraggio (1997) in the late 1990s, demographic trends for Latin America indicated that by the year 2000, 77% of the population would live in cities and of these half would be poor" (p. 65).

In Bolivia alone, 39% of the total population in 1960 lived in urban areas by 2000 this figure has been estimated at 65%, with a staggering rate of migration at nearly 4% annually for the 1990s (UNDP, 1996). Such figures point to the fact that the countryside is rapidly losing its traditional inhabitants as they swarm to the cities. In effect, the *campesinos* have in the last two decades demonstrated a preference for a market worldview, which has tended to transform their sense of living in harmony with nature to one of consumers willing to risk their heritage for economic prosperity.

C. Language

The two major indigenous languages of the Bolivia Andes are Quechua and Aymara, but for the purpose of this study, I will focus only in the Aymara language and cultures. Several authors (Llanque, 1990; Albó, 1988; Layme, 1992) coincide on the notion that the Aymara language is the main distinction that characterize the Aymara people from other Andean cultures. According to Llanque (1990) archaeologists affirm that during the expansion of the civilization of Tiwanaku (around 500 a.c.), Aymara was

the lingua franca of pan-Andean communication. Moreover, during the Inca empire, there were many languages in the Andes though only three major ones: Chimú (*yunga*), Aymara and Quechua (Llanque, 1990; Kolata, 1996).

According to Hardman (1988) the mother language of Aymara as well as two other languages *Jaqaru* and *Kawki* are *Proto-jaqi* languages that date back nearly 2500 years. Today these three "sister" languages are still spoken in Perú and Bolivia[10] though Aymara language is spoken throughout the Andes. The last censuses in Bolivia (1992), Chile (1992) and Perú (1993) affirm there are nearly 1,250.000 Aymara Bolivian speakers, some 48,500 Chilean, and just under 300,000 Peruvian speakers (Pedraza, 2000). In Bolivia, the monolingual and bilingual Aymara populations are located in the states of La Paz, Oruro, Potosí and Cochabamba (See appendix 3: Map of the distribution of Aymara speakers in Bolivia).

The written word has not overcome the obstacles of achieving one standard Aymara system, which in turn would provide the basis for an increase in the number of written texts and documents. Another reason for the scarcity of Aymara books is that the educational systems in Bolivia, Chile and Peru function in Spanish (the official language). Moreover, the few Aymara speakers who are able to read Aymara by knowing the industry, though non-governmental efforts from a few isolate organizations that are trying to produce and disseminate materials. In Bolivia, Aymara is spoken in the urban areas as well as in the rural areas. In the case of my study site and target audience, most all of the primary caregivers only spoke Aymara.

Layme (1992) affirms that language is an accurate reflection, which is structured and systematic, (in the maintenance and organization) of the facts that occur while a culture evolves. The Aymara language survived Spanish domination though its transformations and convergences are indicative of the relationship not only with Spanish but also with other native languages such as Quechua and Aru. In general terms, Aymara is an inflective language from the predominance of suffixes and long words. The alphabet has 26 consonants and only 3 vowels (a, i, u). Pedraza, (2000) points out that each Aymara word has a unique stressed syllable. Normally they are stressed next to the last syllable. However the contracted words, with loss of the last

[10] In Tupe (Lima-Perú) around 2,000 people speak *Jaqaru*, while in Cachuy (southern Lima), few people still speak *Kawki*.

vowel, may have the stress on the last syllable. For instance *Walikiwa* meaning =O.K. when contracted becomes *Walikiw*. To complicate matters further the Aymara language has 4 grammatical persons:

Singular:	**Plural:**
1) *Naya*= I	1) *Nänaka*= We (interlocutor excluded)
2) *Juma*= You	2) *Jumanaka*=You
3) *Jiwasa*= You and I	3) *Jiwasanaka*= We (interlocutor included)
4) *Jupa*= He / She	4) *Jupanaka*=They

The Aymara language is unique in its own right, it has survived multiple conquests and has evolved over time. The Aymara language embodies much of the cultural heritage of its people. There have been several academics and political leaders who have defended their cultural traditions and bilingual education has been one of the main focus points for such debates. For example, academics such as Friedrich Max Uhle between 1894 and 1906 proposed to understand, respect and rescue the past of the native cultures by studying the languages, the folklore, the costumes, techniques and music of the peoples of America. Later, Elizardo Pérez in 1931, created the rural school of *Warisata* that fostered bilingual (Aymara/ Spanish or Quechua/Spanish) education. There are also political leaders such as Mariano Baptista Gumucio (in the 1970's) who advocated for native peoples rights and their cultural values in Bolivia. According to Layme, (1992) Baptista used to affirm that once all Bolivians reached literacy and bilingual education, the country would finally be able to achieve progress.

D. The Aymara Cosmovision

The traditional Aymara cosmovision has a web of intrinsic relationships between economy, technology, mythology, religion and ethics among others. Rather than relying on the logical and efficient causality paradigm of the Western world and the production system, the Aymara world is guided by a "seminal" notion that follows a biological model. The origin of natural phenomena is the *Pachamama,* which is understood as the vital and generating force of the divine universe. Natural beings (plants and animals) grow, flourish and multiply only when they are grown or raised with love and wisdom.

Pachamama is conceived as the mother who nurtures, protects and sustains human beings, but lightning, water, clouds and birds are also children of Mother Nature (Van Den Berg, 1992).

Agriculture becomes a human endeavor that expresses the relationship of humans with nature to that of children of the same mother; therefore, dialogue, respect and consideration are key elements that nurture such relationships. Benevolent, respectful and peaceful attitudes are essential to the Aymara people who believe the *chacra*[11], are the center of the Andean universe both as a space and a practice. Apffel-Marglin with PRATEC, (1996) define *chacra* as a means, "of growing plants, of raising animals and making a cultivated field" (p. 32) as well as a way "to converse with nature. The human *chacra* is not only made [or nurtured] by humans; [but] all, in one way or another, participate in the creation/nurturance of the human *chacra*..." (Grillo *in* Apffel-Marglin with PRATEC, 1996, p. 24). Moreover, agriculture is a survival activity and the Aymara people depend on it, there are strict norms and criteria of behavior with animals and plants as well as the produces. Rites and ceremonies characterize the reaffirmation of the fertility of the land, they evoke the hope of productivity but most importantly the convergence of the vital forces of *pachamama*. For instance, festivities such as Carnivals (Jatha Katu) and Pentecost (Mamatan Urupa) are representations of their gratitude for the harvest period and a renewal of life symbolized by new fruits (Llanque, 1990).

Pachamama is also the conceptualization of the cosmic reality, which expresses the dynamics and relationships among three distinct spheres: physical, spiritual and the world above. The geographical space is the ordered and known reality that is shared by humans as well as animals and plants; while the stars and other heavenly bodies

---

[11] *Chacra:* This essential concept in the Andean tradition sets its roots in the agrocentric sphere but it goes beyond the piece of land or the bed for the plants. Gutierrez & Cardona, (1998) explain further this powerful concept: "[t]o make a *chacra* is a common objective that connects the realm of the collective to the realm of the individual, at the same time that it articulates the relationship between man, nature, and the spiritual... It implies there is will, pleasure, worry, surrendering and sacrifice as well as a movement in time and space; from this standpoint, it is possible to understand that to 'make chacra' is the very happening of life itself. As the concept of 'making chacra' constitutes a common objective, then all the principles that mold a community, revolve around this principle. These principles are equality, fairness that lead to communal stability and become the basis for the regeneration of life. [...]As the concept of 'making chacra' constitutes a common objective, then, too, it becomes a connector that joins the community and the family, given that the interests are common to the collective, and these are aspects of life that guarantee the continuity of life" (p. 135).

compose the world above. The spiritual sphere is the divine world that includes ancestral deities and the world of the spirits. In the Aymara-Catholic syncretic beliefs, God and the saints are also included in the sphere of the spiritual. Llanque (1990) refers to the stages of *pachamama* as:

(1) *Aka pacha:* Pachamama itself, the world around us, the sacred mother earth. The figure of the tiger represents this stage;

(2) *Alax pacha:* The upper world, the celestial world, which is represented by the condor; and

(3) *Manqha Pacha:* The unknown under world. The place where malignant, evil spirits live. This stage is represented by the figure of the snake.

The following short poem lends a flavor of the meaning that *Pachamama* has for the Aymara people:

Pachamama

Thank you, Pachamama,
because we feel your presence,
dressed as a bird,
a mountain or a valley;
thank you for smiling
at us through flowers
of many colours;
thank you because,
in silence, you show
us each nightfall.
"Humility is the way
to eternity".
Thank you for this
wonderful opportunity.

(Free translation)

Reproduced from the Gate of Paradise by Luis Espinoza Chamalú. Published by Gateway Books.

E. Some Elements of the Aymara Culture

The richness of any culture relies on representations found in the spoken language, the attitudes of people toward human principles and the relationships between people and nature, among others. The Aymara culture can be better understood by defining several concepts that are symbolic and representative of the Aymara world.

1. The Sense of Community

Even though the western practice and the ideology of remunerated work has penetrated the Andean culture, there are still some traditions of community life such as the construction of houses, when a group of people build a house of a relative or friend without expecting any material compensation; matrimony; cattle and agriculture. The concept of fiesta is another manifestation of such principle of solidarity, which is the greatest and happiest expression of communal unity.

In the Aymara world, the word *ayni* means reciprocity. Ayni is a daily action that is still practiced in remote and isolated villages where community life revolves around the chacra. It is manifested as a service performed in exchange for exactly the same service in the context of work, ceremony, and everyday mutual help. Moreover, the concept of reciprocity transcends human relations, and it is carried out when a person nurtures a field through her/his labor. In this way the field itself is nurtured by the plants and animals raised therein. Alpaca herders are known to say "[j]ust as we nurture the alpacas, the alpacas nurture us" (Rengifo, 1996, p. 109 in Apffel-Marglin with PRATEC).

Another practice widespread in the Aymara region is know as *compadrazgo*, which originally comes from Spain. *Compadrazgo* takes place when a family establishes a strong friendship relationship with another to the extent that they may undergo a ceremony so as to become 'godparents' of another's children. This ceremony implies that the two families develop a close-knit relationship to the point of almost becoming blood-relatives. Consequently, the system of *compadrazgo* is seen as a safety net at various times in life, which in turn if a couple accumulates these relationships, it increases their status, along with their responsibility in the community (Albó, 1998).

2. The Work and The Land

Work is at the center of family activity. Daily tasks such as: herding, working in the chacra, cooking, sewing, etc., are all shared by members of the nuclear and extended family, even the little ones go to the chacra or stay at home to help the father or mother while learning by doing. *Campesino* life in the highlands is not monotonous, given it is diverse and changes according to the season. For instance, from September to December is the time for seeding; January and February are the months for weeding the crops;

from March to May is the time for harvesting; and between June and August is a time for sewing and mending one's own clothes (Personal Field Notes, June 1999) .

The role of women and men in the working of the chacra follows the Andean perspective that harmony comes in pairs and both aspects are necessary . Women's role at working in the field translates directly into the giving of *seed* - the giving of life - while the role of men is that of preparing the way for the sowing of seed to take place.

Pachamama or mother earth represents the heart of the economic and organizational system as an agricultural society, but it also symbolizes the religious nature of the land. *Pachamama*, the luminaries of the skies, the waters of the rivers, lakes and oceans, and to a lesser extent the plants and animals provide to the humans with sustenance, and all have spiritual significance. The environment as a whole is considered to be living and [an] animated whole that includes man himself. Basing oneself on a cosmocentric vision [of the world], the natural environment imposes itself on man, and he ingeniously adapts to the natural processes" (Huarachi, 1992, p. 210). . In modern times, the concept of sacred land could serve as an alternative to the national unification as well as a universal principle for reaching equitable and fair access to resources across the globe.

3. Family

Family is the center of their personal security. It is the institution that provides the status of adulthood in the community. Only when the couple is established, they become persons or *jaqi* in Aymara, and as a couple, husband and wife, they are *ahari-warmi* with their new family responsibilities and more communal obligations (Albó, 1998). The nuclear and the extended family always demonstrate support and solidarity in all circumstances. Respect for the authority of the older people is very important. Usually the elders take the higher positions in the administration and organization of the communities. The ayllu is at the same time family and community since both of them come from the same origins. The social familiarity is manifested in the property of the land, perhaps the *aynoqas* are fertile pieces of land that during cultivation are harvested by individual families but in other seasons, *aynoqas* belong to the community (Portugal, 1988).

4. Religion

The sense of sacredness for the Aymara mindset involves a keen sense of observation for the needs of other people, animals and plants as well elements of nature.. Respect, reverence, cooperation, reciprocity and caring are all virtues of inclusiveness that Aymara families and communities practice with a sense of well-being on a daily basis.

Sacredness is a constant element in the Andean world. The frame of the cosmological reality is religiosity. Moreover, the presence of supreme beings is absolute for the traditional Aymara. The agricultural activities, the social celebrations, the communal organizational systems, the relationship with family members, community and the natural world, are all based on the connection with sacred and supernatural entities. Today, Aymara people conceive of religion as a syncretic amalgam of elements from both Christian and indigenous traditions.

5. Education

For the Aymara people, education has a bitter-sweet taste, given it has been one of the most powerful instruments of colonization, domination and subjugation since the time of the Spanish conquest. Nevertheless, the rural school constitutes an external source of socialization with the global dominant society - highly valued in the modern Aymara life. Various forms of education such as evangelization, literacy and formal schooling have been developed throughout the history of post colonization with little success, attempting to establish an educational system that responds to the demands of the current world trends. The office of the Bureau of Western Hemisphere Affairs of the U.S. Department of State presented a report on Bolivian education in 1999 that provides some examples of the contradictions on the educational system in Bolivia.

a). Primary education is nominally free and compulsory for children between the ages of 6 and 13, but public schools, although increasing in number, do not meet the needs of Bolivia, which has an official literacy rate of 83 percent. In 1990, primary schools enrolled 1.3 million pupils, about 220,000 attended secondary schools, and about 110,000 were enrolled in institutions of higher education.

b). Most educational expenditures go to operating budgets, especially personnel costs, which leaves little for capital programs and expansion. Spending remains skewed

in favor of the urban areas. Although the education system recorded some progress in enrollments in the 1970s and 1980s, serious problems remained. The number of secondary school students grew twice as fast as the population of that age-group; the university student population grew more than four times faster than the total population of eighteen- to twenty-four-year olds. Still, secondary education remained beyond the grasp of most Bolivians; only 35 percent of the eligible age-group attended secondary school. In addition, significant disparities also existed between male and female enrollment rates. Efforts to increase female attendance ran up against the harsh economic realities faced by poorer families who relied on their daughters' help with chores and childcare.

c). Finally, when Quechua and Aymara speaking children enter school and are faced with a monolingual curriculum given Bolivia does not have a national program of bilingual education: Quechua/Spanish or Aymara/Spanish; Given that Spanish is the language of instruction at every level, native teachers often translate lessons while instructing their classes. One of the challenges faced by an absence of bilingual education, are the high dropout rates among rural schoolchildren (U.S. Department of State, Bureau of Western Hemisphere Affairs, 2000).

In summary, rural families find the need to send their children to school given the opportunities they can get in learning basic skills such as reading, writing and speaking Spanish (the official language), and accounting among others, which in turn will allow the males of the society to survive in a market economy. However, rural education lacks the planning and organization to develop a sustainable learning process for students, and does not take into account the preservation or respect for the cultural aspects of the teaching-learning process.

Chapter 3

Review of Related Literature

The literature reviewed in this chapter supports the two main components of the proposed approach to family literacy, these components are: early childhood development and parental education. The first component is the origin of this study given the parents/participants in the consultation decided to explore ways in which their children's capacities and skills fulfill the educational expectations of the public school system. Facilitators and parents concluded that an understanding of the basic principles and activities for early childhood would help parents to stimulate their children and thus better meet school expectations. In this chapter, I review generalities of childhood development, the main theories that explain human development and several characteristics of specific areas of development. The second component is literacy, which I briefly review focusing on its general meaning, and in its relations with language and culture. The final section of the chapter explores some of the basic aspects of family literacy as well as some critical elements regarding its practices. Finally, I emphasize that the proposal approach is based on the practical experience and collective participation of the group of Aymara families involved in creating a learning environment for both their children and themselves.

A. Early Childhood Development

Constant change is one of the main characteristics of childhood, and it is particularly evident in the first stages of life. Children change in many different ways, as they get older. The way they move, how they think, their ability to understand concepts, their behavior about certain events and subjects and their feelings about specific situations are all signals that childhood is a dynamic development process. Therefore, early childhood development studies concentrate on research and understanding how this changing process occurs in the early stages of human hood, but first, I will look at

what is happening within of a human complex adaptive system[12] in the early stages of life.

1. Brain Development

Our brain is an astounding complex system made up of tens of millions of relatively small basic neural networks, each one of which processes a very specific element of the external world -a simple shape, a rhythmic sound, a sentiment- however, the brain combines the information of all these elements and creates an incredible and complex cognitive environment, integrating, communicating and generating more and more elaborated processes.

There are many doubts and questions in brain research, one of which is related to the nature of brain development. Is it genetic or environmental? Studies about the biology of the brain allow us to conceive that "life becomes a delicate but powerful dialogue between genetics and the environment" (Sylwester, 1993, p. 48). Therefore, the role of both genes and the environment is indispensable in the biochemical development of the brain. Nash (1997, p. 27) poetically describes the process of "biochemical magic" that occurs in the first weeks of gestation:

> The dance begins at around the third week of gestation, when a thin layer of cells in the developing embryo performs an origami-like trick, folding inward to give rise to a fluid-filled cylinder known as the neural tube. As cells in the neural tube proliferate at the astonishing rate of 250,000 a minute, the brain and spinal cord assemble themselves in a series of tightly choreographed steps. Nature is the dominant partner during this phase of development, but nurture plays a vital supportive role. Changes in the environment of the womb -whether cause by maternal malnutrition, drug abuse or a viral infection- can wreck the clockwork precision of the neural assembly line. Some forms of epilepsy, mental retardation, autism and schizophrenia appear to be the results of developmental processes gone awry.

[12] This constant and creative flux is not unlike the principles underlying "complex adaptive systems." The heart of complex adaptive systems is the study of the process of learning, "how systems detect patterns in the environment, interpret and respond to those patterns, and change their roles for detection, interpretation and response based on experience," (...) "it is nature's way of designing for learning" (Cleveland, 1994, no page number).

The nature of the infant brain is that it does not need to *learn* how to recognize specific sounds and shapes because basic neural networks are operational at birth. However, since the baby's brain is a work in progress and the outside world shapes the brain's architecture, it needs to be stimulated enough in order to promote high brain activity. Referring to that Sylwester (1993, p. 48) argues that, "we [adults, parents] do not teach a child how to walk or talk; we simply provide an opportunity for adaptations to an already operational process." In this operational process, especially in the early years of childhood, time plays a critical role limiting the brain's ability to create itself. This time limits or critical periods are "windows of opportunity" that nature hurls open starting before birth and decreasing through the years. Scientists in the 1970's found that making a newborn kitten use only one eye (sewing it), after several months the kitten was blind even after its eye was reopened, the reason being only a few neurons were connected from the shuteye to the visual cortex. They concluded that there is a short, early period when circuits connect the retina to the visual cortex. Begley (1996) adds to this conclusion that the brain dictates how long certain regions stay malleable. For example, sensory areas mature in early childhood; and the emotional limbic system becomes wired by puberty. Circuits for skills such as math and logic reside in the brain's cortex. If toddlers learn simple concepts like "one" and "many," they do better in math and music. Circuits in the auditory cortex, representing the sounds that create words are wired by the age of one. Begley (1996) says the more words a child hears by the age of 2, the larger the child's vocabulary will grow. On the contrary, hearing problems can damage the ability to match sounds to letters.

2. Some Features of Development in Early Childhood

Research in biology and psychology attempt to understand the complexity of human development from a broader standpoint even though there are multiple cultural perspectives that complement such an approach. I will focus on the current review of approaches on two stages of childhood development: infant and toddler development (from birth to age 2), and preschool years (from age 2 to age 5). In the following pages, I will describe three aspects of the development process: Cognitive, Social and Emotional characteristics.

2.1. Infant and Toddler Development (from birth to age 2)

2.1.1. Cognitive Development

Children's cognitive development is influenced by daily interactions within a cultural community. Fabes & Martin (2000) describe *"apprenticeship in thinking"* as the natural engagement that parents, caregivers and adults of the community promote in children to participate in daily activities. Adults play an essential role in supporting children interactions with the environment as informal teaching methods, which Fabes & Martin (2000) call *scaffolding*. Such methods help children to extend their current skills to a higher level of competence. However, the methods vary according to the culture, there are methods oriented to social interaction (i.e., drawing attention to others) as opposed to those that prefer activity oriented methods (i.e., drawing attention to objects).

Piaget (1952) elaborates a substantive theory that refers to sub-stages of infant cognitive development. The following table describes the most important activities in the first two years of age:

Table 1. Childhood development in the first two years

Sub-stages	Age	Description
Reflexes	0 to 1 month	Infants perform simple, involuntary reflexes.
Primary Circular Reactions	1 to 4 months	Infants engage in circular action with their bodies. A movement or vocalization is made; there is still no understanding of cause and effect.
Secondary Circular Reactions	4 to 8 months	Infants engage in circular reactions that involve objects. They may shake a rattle, note an interesting result, and shake it again. There is still no understanding of cause and effect.
Coordination of Secondary Circular Reactions	8 to 12 months	Infants can perform a series of actions that have been performed in previous stages, The may snake, then bang, then chew a rattle. They understand that certain actions cause certain consequences. So, they engage in goal directed behavior -they set out to cause something to happen.
Tertiary, Circular Reactions	12 to 18 months	Infants can perform novel, never-before-tried action to solve problems, e.g., they may use trial and error to obtain an interesting object place high on a kitchen counter.
Mental Combinations	18 to 24 months	Infants can solve some problems using mental images. They can think through their actions without actually performing them. They can study and later imitate the behaviors of others.

Source: Adapted from Trawick-Smith, J. (2000) "Early Childhood Development: A Multicultural Perspective".

2.1.2. Social and Emotional Development:

One of the main features in the first two years of life is the attachment that children develop with their parents and caregivers. Erikson (1963) explores the trust behavior that children develop in those early stages. He affirms that emotionally healthy babies come to understand that they have responsive and nurturing caregivers who meet their basic needs. The consequence is that children see the world as safe and predictable. Another common behavior at an early age is anxiety for separation of caregivers, which is shown by infants of 6 to 8 months of age characterized for fear of unfamiliar persons.

Autonomy is another element that begins to manifest in the second year of life. Erikson (1963, 1982) argues that once children realize they can trust their parents or caregivers to supply their basic needs, children are ready to venture away from parents and other adults. Children learn quickly the rules and norms that govern their

surrounding world and try to rebel against them, and presume a negative reactions when confronted with adult control.

Fabes & Martin (2000) point out that the outbursts of emotions in the first years of life change continuously. Emotions go from interest, curiosity, joy and excitement to sadness, disgust, anger and frustration. As early as one month of age, a child can express interest, joy and disgust; at 4^{th} months sadness and surprise is recognizable, and by the 7^{th} month, children can feel fear.

Children build self-awareness little by little, which implies cognitive and emotional development. Lewis (1993) characterizes some elements needed to reach self-awareness: (1) Children understand that they are distinct from others. (2) There are some rules to be followed and standards to be met. (3) They are able to evaluate their behavior in relation to those standards. (4) At first glance, elements seem very hard to meet, but in fact children at the age of 20 months show sings of embarrassment when they are caught violating a rule -they may lower their eyes, hang their head, and hide their face with their hands (Lewis, 1993).

2.2 Preschool years (from age 2 to age 5)

2.2.1. Cognitive Development

When a stage of discovering, acting and mastering a set of skills is ending, a new and exciting stage arrives. Children at the preschool years think problems through before acting. Piaget calls this period *"preoperational thought"* (Trawick-Smith, 2000). Children between 2 and 5 years old go through an accelerated improvement in their problem-solving abilities. These are enhanced by daily challenges that demand more concentration and persistence but also independence in working on problems (Eisner, 1982; Helms & Turner, 1986).

Piaget's description of the tasks that show preoperational thought offers a sequential model for understanding children's performances. Exercises of description and perception show the sophistication of the learning development process. By playing with the attributes of objects such as color, shape and size, children are able to recognize concepts of conservation of number, conservation of continuous quantity and categorization (Helms & Turner, 1986). Memory and remembering play important roles

in solving problems. Retention and retrieval skills have been acquired and this is the stage, when children might need to use the stored information.

The perspectives of Vigotski's theory on language complement the contributions by Piaget, since Piaget does not pay much attention to the role of language in childhood development. (Vigotski, 1978, in Trawick-Smith, 2000) argues that children's learning is highly influenced by the interactions and conversations with other people. When children speak for themselves, they are organizing their own ideas. Self-directed speech helps children to situate themselves in a universe of signs and codes they understand. While vocabulary acquisition is rapid, comprehension of word meaning and the interrelational value of words are slow to develop. Cognitive, physical and social stimulations help children's development of abstract qualities of such as words and their use, for example.

2.2.2. Social and Emotional Development

The preschool years are a crucial period in life for the formation of positive feelings toward oneself, others, and the larger world. Children will find an emotional balance if they are nurtured, engaged and accepted by peers and adults. A threatening environment, on the contrary, causes emotional instability and affects the children's relationships with others, and with themselves.

According to Erikson (1963), social initiative (characterized by showing interest to reach out to others, making social contacts and speaking to others) is one important aspect in both social and emotional development. Friendships and social participation become fundamental during preschool years. Independence (which implies interactions with peers and other people who are not the parents or relatives) is also another characteristic in these years. Children enjoy speaking to other children, playing, inventing and solving problems with others.

It is also the time to deal with aggressive behaviors, which can be physical as well as verbal that is intended to harm or threaten others. Trawick-Smith, (2000) explained that aggressive episodes can be categorized as either reactive or proactive. Reactive aggression involves physical or verbal actions that are provoked, while proactive aggression involves unprovoked physical or verbal actions, though some of them might have an instrumental purpose such as to get a toy.

The following chart reviews some characteristics of the preschool years (from 2 to 5 years old) and the four competencies of development: Language, Physical, Intellectual and Cognitive, and Social & Emotional Development.

Table 2. Preschool child development

Set of skills	Description
Language Development	In the first two years, children build a vast database of words, especially nouns, and begin to explore speaking and combining two words or making short sentences, but in their third year, they are able to use verbs, adjectives and pronouns. Children are able to engage in short stories, interact with the subject and relate to it. They can make comparisons of events, situations and objects. In general, preschoolers respond to their world primarily through behavior. Language allows children to forge symbolic connections with the people who care for them. Thus they can move away from the adult physically while maintaining an internal mental connection. Toddlers use their first words to label or comment on what they see. As they develop, they begin to use language for talking about things that are not in the room but in their heads, and for expressing ideas that are theirs alone.
Physical Development	A typical child evolves from a round, plump toddler, to a slimmer, elongated five-year-old. Acquisition of voluntary control over the muscles that govern elimination, which the potty training.
Social and Emotional Development	By the time they reach preschool age, a child's personality has begun to evolve. Through interacting with the world, children acquire more traits and characteristics besides their natural temperament. A child's earliest emotion (like pleasure, anger, disgust, surprise, and fear) are often self-referential. By preschool years, children can experience emotions in relation to others; for example they can feel embarrassment when they attract unwelcome attention. At three, children assert their beliefs in their own omnipotence and magical powers. By the end of their fifth year, children plan and ideas may still be grand, but they are modified by a sense of limits and consideration for others. By the time children reach elementary school, they have learned a great deal about roles they are expected to play and how to behave in accordance with them; how to control aggressive feelings; and how to respect the

	rights of others. At the same time, they have developed a clearer sense of themselves, their abilities, and the ways they react in different situations.
Intellectual and Cognitive Development	Toddlers thinking is based on trial and error; by the elementary school years, thinking is based on internal processes During this period of growth, children are able to understand, to process and to express information, to solve problems, to remember, and to communicate. As children's capacities to hold on to thought and emotion expand, they begin making simple choices. They remember what they enjoyed last time, they can state what they prefer now. By the age of three, children have the basic ability to allow one thing to represent another. This kind of knowledge is reflected in their ability to use words to stand for objects, people, and actions, and to engage in pretend play. At four, children can believe that their thoughts are transformed magically into terrible actions, and that they will be punished But at the age of five, children begin to recognize the difference between thinking and doing, and that their thoughts do not magically produce effects.

Source: Pruit, D. (1998). Your Child: What Every Parent Needs to Know About Childhood Development from Birth to Adolescence. New York: HarperCollins Publishers, Inc.

Childhood development entails a fascinating variety of developments that go from moving hands and touching objects to exploring the meaning of words, understanding complex concepts and solving social conflicts. Cognitive, social, emotional and physical developments interconnect with each other and require stimulating environments, as well as parents and adults who guide that process. Early childhood development is an essential subject that all parents and caregivers need to dedicate further attention to and study.

Main Childhood Development Theories

Theories in general provide a body of reasons, viewpoints, perspectives and assumptions on a specific subject, and then these need to be tested and contrasted with a practical or applied dimension. This is how theory and practice complement each other. In psychological and educational interventions, theories play a very important role in determining the direction of practice, how the profession deals with a specific situation

or problem, and the making of actual decisions. For the purpose of this study, I briefly review the main theoretical assumptions of childhood development that serve to establish the conceptual framework of young children's potentialities.

Several interrelated theories of childhood development can be identified that contrast and complement each other. The following table shows a concrete review of 6 of these prominent theories:

Table 3. Childhood development theories

Theories	Prominent Theorists	Assumptions about Child Development
Maturationist Theory	Gesell (1933)	Genetics determines human traits. Children simply mature with age; environment does not play a crucial role.
Behaviorist Theory	Watson (1929), Skinner (1948) & Bandura (1989)	Human traits are acquired through experiences within the environment.
Psychoanalytic Theory	Freud (1938) & Erikson (1963, 1982)	Emotional development derives from an ability to resolve key conflicts between desires, impulses and pressures from outside world. Adults can promote children's emotional health by providing appropriate opportunities for the gratification of drives.
Cognitive-Developmental Theory	Piaget (1971)	Intellectual development is internal and personal. Learners, who strive to make sense out of experience, construct knowledge actively. Learners assimilate new ideas into what they already know, but also adjust previous thinking to accommodate new information.
Socio-cultural Theory	Vygotsky (1962; even though he developed his theory in the late 1920's)	Adults and peers can "scaffold" children's learning by asking questions or challenging thinking. Through social interaction and verbalization, children construct knowledge of the world.
Ecological Systems Theory	Bronfenbrenner (1979)	Development is influenced by the personal, social, and political systems within which children live. Interactions between the family, school, community, social and political system, and the individual child determine development outcomes.

Source: Trawick-Smith, J. (2000) "Early Childhood Development: A Multicultural Perspective".

Each theory mentioned above focuses on an assumption as a crucial factor in explaining human development. I will quickly expand on the Ecological Systems Theory since it approaches development in the complexity of its layers and interconnections.

This theory focuses on the larger context of childhood development; and how social institutions, settings and complex dynamics influence the development of every human being. Bronfenbrenner (1986) refers to the word ecology as a means of designating the diversity of factors in the environment that promote the development process. Family, local social service agencies, schools, state and federal governments, the media, and the current political thinking of the time must provide explanations on human development. Each of these settings is an ecology that coexists at multiply levels. The immediate environment is the *microsystem,* which directly affects childhood development. Family, personal experiences, school, teachers, caregivers and peers belong to this microsystem. The interconnections and linkages between institutions and people influence directly the development of children. Bronfenbrenner refers to this broader environment, as the *mesosystem*. For example, schools affect parents and parents affect schools. The proponents of ecological systems theory affirm that when there are strong and supportive linkages between people and organizations in the microsystem, they enhance the development of children (Trawick-Smith, 2000).

There are also environments that affect children indirectly. These persons and institutions may not directly affect the experiences of the children but they exercise influence in a larger context, for example the welfare department, the legal services department, a friend of the family, etc. This ecological system is the *exosystem.* The last ecological system is the *macrosystem*, which embodies overarching values, ideologies, laws, worldviews, policy-making decisions and customs of a particular culture. Even though these elements are far from the individuals, they have a great influence on individuals. Discipline and punishment are good examples of the exosystem since they are cultural constructions, for some societies physical punishment is considered necessary to mold the child's character. For other societies, respect and caring of children are enough to strengthen the child's character.

In conclusion, the ecological systems researchers center their theory on the influence of external environments over human development. Although investigations in this theoretical domain also include studies of the interactions of genetics and environment in family processes, and how transitions and linkages between the family and other major settings (such as hospitals, daycare, peer groups, school, social

networks, neighborhoods and communities, etc.) have tremendous influence in children' development (Bronfenbrenner, 1986).

Appendix 2 provides a graphical review of the 4 environments that influence children's development according to Bronfenbrenner and collaborators.

B. Literacy

The word literacy in English comes from the word 'letter' as in Spanish, 'alfabetización' comes from the word 'alfabeto' meaning 'alphabet'. Literally, literacy would be defined simply as the human skill to communicate by reading and writing. In addition, a common understanding is that a literate person is one who becomes educated for his/her interest in acquiring knowledge from literature. However, the concept of literacy goes beyond the ability to read and write. Gee (1990) argues that the traditional concept of literacy is autonomous and asocial, and its reductionism does not represent the profound meaning that literacy has in any society. The written world has many definitions and explanations; however, most of them are contradictory and divisive in nature and few complemented each other (Scribner, 1984).

Literacy is often assumed to be a commodity that can be grasped and explained, but the very nature of this approach is contradictory and conflicting. Sylvia Scribner sees literacy as an acquired set of abilities that occur through the course of socially organized activities with a written language, that change over time and space. In essence, defining literacy becomes a matter of assessing what counts as literacy in any given social context (Scribner, 1984). Street (1988) refers to it as not only a juxtaposition of technical skill that is neutral and universal across all societies but argues that it involves fundamental concepts and values at the level of culture. He defines literacy formulating basic questions about what is truth and what is knowledge and how they vary from one social group to another. Therefore, part of the continuity of cultures depends on the ways people learn and express themselves. Street, (1988) and Gee, (1990) introduce the classic concept of the "great divide" between oral cultures and literate cultures and its implications such as empowerment, emancipation, power structures and so on.

Literacy in a socio-cultural approach has received particular attention from several disciplines such as linguistics, sociology, anthropology, social psychology and

education, which are involved in an emerging interdisciplinary field that Gee (1990) calls "the new literacy studies". Each discipline orients its work in a particular 'literacy.' From a psychological perspective, Scribner & Cole (1981) examine two questions: Is it literacy or formal schooling that affects mental functioning? And, can we distinguish among the effects of forms of literacy used for different functions in the life of an individual or a society? Another perspective comes from Brian Street who proposes the concept of opposing forces working between an *"ideological model"* and an *"autonomous model."* The autonomous model defines literacy as concrete social practices, while the ideological model implies that literacy has to act with other social factors and active conditions such as sociopolitical conditions as well as economics and local ideologies (Gee, 1990).

In the process of criticizing the limitations of the classic concepts of literacy and the consequences beyond learning the skills of reading and writing, Rahmena (1976) introduces another perspective; people use literacy as a tool for discovering the world and their role in it. The goal of literacy, for Rahmena, (1976; pp. 167) consists on "how to 'decode' the world, the actors and actions constituting life and reality." Rahmena says, literacy implies starting "the journey from primary to critical consciousness." From this point of view, when a person becomes literate she/he feels self-liberation and is ready to recognize the potentialities of acting in the world independently when she/he is able to "read the world." However, Rahmena (1976) recognizes the vital importance of change in the educational and sociopolitical structures, and literacy is seen as the starting point rather than the culmination in the development process. This perspective could be possible only when the gap between the two groups of nations: "one economically powerful and educationally advanced, and the other of dependent illiterates" (Rahmena, 1976; pp. 179) is fixed. This implies that all nations are interconnected in some way and have to work together in order to obtain prosperity for all.

The classical work on education by Paulo Freire starting in the early 1970's in Brazil, challenges the traditional definition of literacy. According to Freire, illiteracy is seen as a "contagious disease," which is cured with the mechanical act of "depositing" words, syllables, and letters into illiterates (Freire, 1985). Freire calls this model as "banking education" (Freire, 1970). For Freire, a person is illiterate only when he/she

realizes he/she that is living in a literate culture and recognizes the problem associated with not being able to recognize letters (Freire, 1985). He develops a comprehensive theory and method called "Transformative Literacy" where the adult learners organize their thinking process, develop a problematical vision of their world, critically analyze their own experiences, and strive towards becoming actors in transforming their world. *Conscientizacao* is the term that he refers to as "learning to perceive social, political and economic contradictions, and take action against the oppressive elements of reality" (Freire, 1970; pp. 19). The role of literacy, for Freire and his collaborators is "liberatory" and implies active involvement in the political arena.

Freire's "Pedagogy of Liberation" offers a broad set of tools for reevaluating the purpose of education, and the relationship between teachers and learners; for reviving cultural meanings; and for overcoming socioeconomic injustices connected to political and economic structures of society.

1. Language, Culture and Literacy

There are many dilemmas on what are the appropriate language or languages for developing literacy programs. In regions, where more than one language is used, language becomes an issue in literacy and many variables affect decisions. Fordham argues that "language is frequently the most important basis of cultural identity and often [constitutes a level of] political, religion and historical identity as well" (Fordham, 1994, pp. 65). In any case, language choice for literacy should be associated with the relationship between the needs of the community and the global context that frame the community.

Considering literacy as a tool for change, the notion of culture in the discourse of literacy arises when culture is considered a vast and intricate network of relationships and dynamics between human communities where:

> The behavior of every living member of the ecosystem depends on the behavior of many others. The success of the whole community depends on the success of its individual members, while the success of each member depends on the success of the community as a whole (Kapra, 1996, pp. 298).

Several questions come up at this point, if culture means a set of integrated patterns defined by groups of people who interact with each other in a dynamic web that changes constantly, what are the forces that cause change? What are the patterns? Who defines the dynamics of culture? What is the role of family, educational institutions, religions and community groups as the moral bases or foundations of culture? What are their potentials for change? Is the nature of culture an internal process within a society? What about the relationship between two or more cultures?

Given that culture is an extremely complex concept, it is impossible to assume that individuals, institutions, or governments will define the new patterns of a culture because it functions as a network of patterns. Individuals as well as groups of people synthesized culture in a daily basis. Hall (1989) suggests looking at the common settings and situations that reflect the way people live, for instance: "greeting, working, eating, bargaining, fighting, governing, making love, going to school, cooking and serving meals, hanging out, and the like" (Hall, 1989, pp. 129). He points out that the situational frame "is the smallest viable unit of a culture that can be analyzed, taught, transmitted, and handed down as a complete entity. Frames contain linguistic, kinesics, proxemic, temporal, social material personality, and other components" (Hall, 1989, pp. 129). Ultimately, frames represent the materials and context in which actions occur.

Considering the complexity of the inner dynamic of culture, how can literacy practices be fit? As I mentioned early, individuals and communities –as groups of people working together in order to get a common goal- are constantly modifying their own culture, literacy as a unit of practices plays a significant role. If literacy is seen as a powerful tool for change, what kinds of changes can literacy practices make? What are the implications that affect the complex intertwined network in a culture? How will change affect new generations? There are many implications that affect the complex network and these can have severe consequences. One example is the impact of modernization in many countries all around the world. After several decades of implementing modern/industrial techniques in agricultural practices in the tropics, rainforest has been destroyed at a large scale, ecosystems are endangered as well as ancient traditions and ways of living. Street (1984) calls to the process of impacting the socio-cultural scenario through literacy and health practices, the "*colonial literacy.*" "Technical" and "dominant" literacies offer further examples of how the acquisition of

literacy has profound implications for community dynamics. However, popular education and participatory methods for introducing literacy into a culture generate a process of change that seems less harmful. Participation generates a space for communities to define their future as part of a culture. The relation of literacy, participation and culture could be seen -using participatory approaches-, as a continuum where literacy is the path, participation is the process, and cultural change is the goal.

Literacy activities from the perspective of popular education should provide the opportunity to develop not only the reading and writing skills of the participants, but also the capacity to be aware of their own dynamics as individuals as well as members of a community. Participatory literacy programs need to start where people are, from their reality, and their interests, and from their own knowledge; considering how the program promotes peaceful and caring environments where people grow together. As a result, literacy activities create spaces for people to learn skills beyond oral communication and recognize their own needs and the way to solve them. The role of the facilitator in the whole process, is one who knows the community and the local socio-cultural dynamics well and is able to orient the organizing process and to develop some research skills and facilitate the connections with the policy strategies within the system.

2. Family Literacy

I would like to begin this section with an interesting description of the meaning of family from Carmela, a woman who was enrolled in 1990 at the Read, Write Now Adult Learning Center, (United States):

> Family, what a beautiful word if it is interpreted the right way. The way it is supposed to be, a group of people with some roots, with some blood. They should feel lots of love and respect for one another and support when it is needed. To have family means to be morally rich and secure and have help when life is tough with you, giving you the strength you need to flight back. That's what the word family means to me."

Family is considered a cultural unit, a social unit and a dynamic system of socialization. According to McNaughton (1996) one of the main functions of the family is to socialize children into the ways of thinking and acting that are appropriate for the

community of which the family is a member. In a broader context, Bhola (1994) looks at the connections between family and nation, and how to produce models that connect family literacy and other literacies with community and national development.

Family literacy comes up when literacy skills are used in daily life, so there are a variety of motives for adults wanting to learn how to read and write. One of the social roles of adults in parenthood and literacy programs can be oriented to support parents in promoting the school achievement of their children (Weinstein, 1990). Other adults in the community also take the responsibility of helping children to learn. Weinstein, (1990), points out the term "Intergenerational Literacy" to extend the literacy programs to caregivers (family members such as grandparents and older siblings, neighbors and volunteers). The relationship between parents/adults-children-school implies other goals for family programs, including: the creation of a home environment that supports children's learning needs; the promotion of a home environment for improving skills, attitudes, values and knowledge related to reading for parents and adults; the development of a culture of understanding the world by discussing and analyzing the contents of reading and writing (Weinstein, 1990); the keeping of tradition stories and history of the family/community by developing literacy activities, which involve the participation of all members of the family. The family literacy practices also help to maintain language. Sometimes the school activities are conducted in other languages different to a home's language. Reading, writing and oral activities at home contribute to saving local languages.

McNaughton (1996) identifies three key elements that define the role of family literacy:

a.) Families arrange time and provide resources, which socialize children into their literacy practices.

b.) Family practices reflect and build social and cultural identities.

c.) Literacy practices are expressed in specific activities, which have identifiable constituents. These include goals, rules for participation, and ways of carrying out the activities.

In the traditional literacy arena, the main purpose of family literacy programs has been to support parents in promoting their children's school achievement. Using literacy

skills, adults promote the importance of children's education and reduce school drop out rates. At the same time, family literacy emerges as a way to promote closer relationships within members of the family working in practical activities that enrich the dynamics of the family itself.

Auerbach (1989) explores a broader context of family literacy, one she calls *Social-Contextual Model of Family Literacy* by questioning the simplistic process of transferring school practices into home contexts. Instead, she proposes a model that can draw on parents' knowledge and practice to inform instruction.

Auerbach's (1989) approach focuses on the promotion of activities, events and practices that correspond to a broadened definition of family literacy:

a.) the mutual interaction between parents and children in developing literacy skills (taking turns to read and listen to written stories);

b.) parents working independently on reading and writing (parents improve their own literacy skills);

c.) using literacy to address family and community problems (dealing with employment, housing, personal finances, etc.);

d.) parents addressing child-rearing concerns through family literacy classes (spaces where parents share and develop their own strategies to deal with issues such as teenage pregnancy, discipline, and children's attitudes toward language choice).

In conclusion, parents' literacy skills, along with their attitudes about learning and formal education, have an immense impact on their children's academic achievement. Parents with poor literacy skills, despite their few opportunities for education or bad school experiences, are still often able to foster their children's development through innate, nontraditional literacy activities (Taylor, 1993). However, a family literacy program can enhance engaging and fulfilling experiences by using literacy at home and community. Taylor, (1993) suggests that the practice of family literacy should occur naturally during the routines of daily living, thereby helping both adults and children "get things done." The potential for family literacy programs in rural communities is great when it is seen as a new and innovative way of learning

considering the desire to keep cultural traditions and language as well as the need to organize free activities during free time periods.

Chapter 4

Description of the Study

The following pages of this chapter provide a complete description of the study, including the organizational context of the Family Literacy program, my personal involvement and the proposed components of the program. The first part of this section portrays the origins of this program, which is framed in a larger context of an ongoing community work that CEADB (Dorothy Baker Environmental Studies Center), has developed for the last twenty years. In the second section of this chapter, I make an account of my personal involvement in the project and the outcomes of my role as a non-formal education researcher. The third section presents the description of the model and activities proposed.

A. Family Literacy and the Organizational Context

The Family Literacy program is an initiative of CEADB that carries out research, education and extension activities related to the rural Bolivian Andean environment. Although, CEADB focuses its work on creating community programs to control erosion and restoration of degraded land in the high valley and altiplano areas of Bolivia, it fosters other programs related to education and health that complement a holistic view of improving the quality and conditions of rural life in Aymara communities.

A few years ago, when the Director of the organization, -who has lived for more than three decades with Aymara communities in Peru and Bolivia- came up with the idea of creating an educational component that complement their systematic efforts on the environmental front. The Aymara communities responded positively, in part given the lack of governmental support in the educational arena. Followed by his firm belief on the importance of educating sons and daughters from their earliest years to master every kind of learning, the Aymara families and CEABD workers outlined the basic tenets of the program. The basic purpose of the program was geared to stimulate parents of preschool children in communication skills as a base for developing their reading and

writing skills as a way to face the constant changes of a modern world in which they are a part of. Dr Baker, the founder of the organization, says:

> "In the third world countries, there are many traditional groups [indigenous peoples] in which education through parental association used to be a major element in the formation of the children who worked with their parents in the fields, went with them to market, learned weaving and other skills at home. However, these associations have not provided effective ways to adapt to the modern world and family influence has diminished. In many areas they are just ineffective. Parents are no longer role models. Children look else where, but what they find, does not really replace family. The role of parents gains major importance if they prepare their children for life both in school and after."
> (Personal interview, July 2000)

The first materials of the program were completed in August 1997, and a group of five families from the community of Pasto Grande, participated in the initial implementation phase. Since then, families from other communities of the Tapacari area and the Department of Chuquisaca have worked through the materials, though the program design is still a work-in progress.

1. Current State of the Program

As to the organizational activities of the literacy program, the CEABD team has focused its efforts in establishing networks with organizations and individuals that support community literacy in rural areas so as to learn from other experiences, access funding, and expand literacy resources. As to the curriculum of the program, the initial materials have been designed for a one-week course as a way of developing communication skills in four stages:

- Understanding speech
- Speaking
- Understanding writing and reading
- Writing and reading in a family environment

The course is given in Spanish and Aymara, and it emphasizes the role of parents in three components:

a.) As guides for the children's process of socializing with the language/s and communication.

b.) Parents' learning process through enriching children's communication skills.

c.) Learning how to create "free time" for families to share learning activities.

By 1999, four sessions of the course had been carried out in the CEADB facilities at Abra, near the city of Cochabamba. The mothers, fathers and children who came to the family literacy courses were also involved in other CEADB programs. The communities decide themselves what families would attend the course, and made apropriate arrangements according to the seasonal calendar. At the course, some sessions involved both parents and children, others sessions were especifically for parents while children had their own activities. The methology of the program is participative, learner-centered, and combines theoretical and practical activities. Each session has four parts: a.) Active experience: Practical exercise to introduce the main idea of the session. b.) Reflexion: The group discusses on the practical exercise in the first part, and relates it to their personal life and context. c.) Conceptualization: The learners understand the concepts, analyze examples, and make connections. d.) Practical application: The learners find ways to apply new knowledge into their daily lives.

As to the evaluation of the program, at the end of the course, facilitators, parents and children explore the most useful and less useful parts of the course, the material, the logistics, and the application of the materials and exercises at home. On the other hand, the extension people or community workers who visit the families in their communities make a "trip report" based on observations and practices with the parents. Finally, as the program progresses, the school teachers are asked for their observations and recommendations to the children participating in the program.

The main objectives of the program include:

- To prepare parents, open to other community caregivers, to use literacy learning in their daily normal life activities (literacy in use).

- To understand children's developmental processes (gaining knowledge and learning attitudes).

- To support parents in guiding their children with school activities.

Other objectives of the program related to the organizational structure include:

- To seek funds to launch the program in 10 to 12 commnities in Tapacari and Chuquisaca. Each course will be offered to a group of 5 or 6 families.

- To have extension teachers who will carry out regular literacy activities at the communities.

- To develop teaching materials and workbooks for use in homes

B. My involvement in the Family Literacy Program

It was during the Southern Hemisphere's winter of 1999 (i.e., June - August) when I had the opportunity to visit the Bolivian highlands, a place where silence abounds and where the stars and the plains sleep together. I had a cup of "api"[13] in my hands, a "chulo"[14] on my head, and several layers of wool garments trying to keep my body warm, while I was listening to an Aymara conversation intermixed with some words in Spanish. It was on a windy afternoon that I realized that my journey of learning as a graduate student of Non-formal education would be more meaningful by joining the path of rural education with Aymara families who consider that learning is a continuum process that occurs beyond schools and classrooms structures, and that in those places, many mysteries of the world are deciphered.

I first met the people from FUNDESIB who gave me the opportunity to learn about innovative and community-base approaches for social change in the Andean highlands. I, then, discovered CEADB, an organization that sees change as a dual process whereby individuals develop their latent human capacities for well-being, and institutions that contribute to the transformation and empowerment of communities via process of facilitating their own means of identifying and responding to their community development needs and priorities. When I was invited to join the project in June 1999, some components of the program were already functioning and implemented, but the CEADB working team sensed the need for a broad and systematic revision of the program design. They asked me to reframe the program from its goals to its implementation. I will dedicate the next few pages, to developing a curriculum framework for the Family Literacy Program.

---

[13] It is a hot and sweet beverage made from purple corn that grows in the high valleys of the Andes.
[14] It is the traditional colorful hat made from alpaca wool.

C. Description of the Proposal

Gabler & Goethel (1996) suggest 5 components to review comprehensively a Family Literacy Program; these are: 1.) The basic concepts and goals that frame the program; 2.) The essential activities that will make the program achieve its goals; 3.) The key components of the content of the program, which in this case are: adult education, children's education, parent/child interaction, and parenting education; 4.) Organization of the operations of the program that involves the coordination of the program, network and partnership with other local, national and international organizations; and 5.) Assessment and evaluation, which explores strengths, weaknesses and possibilities for making improvements and changes to the program.

1. The Emerging Concepts:

It is essential to define some key concepts that shape the theoretical and practical grounding of the program.

1.1. Family Literacy

I spent some time traveling and getting to know the work of CEADB, including the agricultural initiatives, and talking with diverse people (i.e., community members, the CEADB director, and the community workers), in order to begin to understand the world of the participants of the program, and what has been done so far. I found almost immediately a strong interest on the part of the parents and other members of the community (i.e. elder people) to find ways for filling the gap left between the fundamentals of their traditional way of living (i.e., cosmovision and community practices) and the current trends of modern life (i.e., urban life-style, involvement in the Western market economy, children bearing, etc.), which in turn leads them to get motivated to develop their reading and writing skills.

Consequently, I questioned how the program is actually solving this particular interest. What is really family literacy for these Aymara families of the highlands of Bolivia? I see two dimensions of the program: one that sees the adult learners as parents; therefore, family literacy focuses on two main aspects: 1.) To understand the importance of the early stages of development of pre-school children's minds, and how to improve their communication skills; and 2.) To narrow the gap between the school

and home environments, and bring about the importance of correlating both places as key support places for children in their critical stages of individual development.

The other dimension is focused on the adult literacy (where the parents: mothers and fathers take the role as adult learners), where literacy becomes a mean of getting into other ways of understanding reality, as a tool for reencountering oneself and explore one's possibilities of expression and identities. The goal is that having those elements at hand, program participants grasp the tools (critical knowledge, practical knowledge, and skills) to decide how to live in a modern world and yet sustain their traditions and cultural values.

These two dimensions of the program set the tone for further development of the program.

1.2. Community-Based Literacy

Once the definition of family literacy is established, we need to delineate other cornerstone elements in this educational project that is centered on community life.

1.2.1. The principle of Learner-Centeredness:

It guides the literacy practice by encouraging learners to become involved in their own learning process (as opposed to teacher-centered education). The learner centered approach assumes that everyone can learn at any age; it reinforces the active participation of learners in setting their own goals and determining their own curriculum. It encourages respect for learner's life experiences, and emphasizes equality among learners, facilitators, and staff.

1.2.2. Literacy with a Critical Perspective:

The process of becoming literate includes coming to understand oneself better within a social context as well as the importance of participating actively in society. The learners come to reflect on the relationship between language and the expression of identity. One of goals of the literacy program is to move from cultural expressions into the public realm. In this sense, community-based literacy practice involves more than reading and writing; it entails raising questions about learners' practices, attitudes and

values. In synthesis, the critical perspective means encouraging people to not just read specific texts but to become critical thinkers and problem-solvers.

1.2.3. Community Building:

It encompasses the process of gathering together and develop collective action strategies to strengthen the community. The principle of community building implies that becoming literate person is not an individual process, whereby only the learner benefits from the skills, but it can shape community life by using the gained skills and abilities to serve others and solve common problems. In this sense, literacy is a great resource for the community.

Finally, community-based literacy highlights the concept of empowerment, which comes from the understanding gained through praxis[15] that the community knows how to solve its own problems.

1.3. The Importance of Multilinguism

This family literacy program seeks to harmonize the use of Aymara and Spanish, maintaining the nobility of both languages in their respective contexts. Preserving vernacular languages implies maintaining ancient cultures and their roots. Aymara is a good example of the interconnection between culture, language and literacy. On the other hand, even though Spanish has promoted a great acculturation phenomenon since the start of the 20th century, it is the dominant language of instruction in rural schools, for core classes such as reading, writing, and national history as well as vocational work including carpentry, smithy/forge and pottery, and powerful medium for dealing with the modern world.

1.4. School versus home education

The need for an understanding of the importance of both school and home is portrayed in the thoughts of Durkheim and Freire about education. Durkheim's definition of education leads to the responsibility of adults teaching children to develop physical, intellectual and moral stages that the social, cultural and political society and

[15] The process of theory informing practice and vice versa, that leads to strategic action (Freire, 1970).

the environment will ask for. On the other hand, Freire's definition argues that education is a process of communication since it is originated in dialectical relations between individuals and the world (Pérez, 1993). I see two basic adult institutions that lead such responsibility and the communication process: school and parents. For Perez, the role of school is to socialize children in the dominant system while non-formal education prevents or resists such domination (Pérez, 1993). Therefore, formal education (school) and non-formal education (home) are seen as two contradictory scenarios that overlap interests and do not conduce to an integrated and harmonious relationship. My point here, is that both scenarios, school and home have an important role in the education of new generations; however, the community rather than taking the role of government must to delineate the inherent elements to educational planning, where community participation must be the "central axle."

On the other hand, school and home need to become centers of active learning where children interact in all arenas of the community and parents, teachers and adults support such learning. The use of time for children is a key factor, since families have to dedicate most of the time to survival tasks. Nedler and McAfee, (1979) argue that teachers (in this case, the workshop facilitator and extension teacher) must be sensitive to the many other demands on a parent's time and plan an involvement program that considers and responds to individual needs.

1.5. Gender and the Literacy Program

In a family literacy program, gender is an intrinsic and relevant element to deal with in theory and in the practical realms throughout the program design as well as the implementation phases. In the Aymara world, women have a crucial participation in the economic arena, but in other community roles, men subordinate women. Decision-making is a masculine process, and in community decisions, women are excluded except on occasions when they substitute for their husbands (Buechler & Buechler, 1971). Several questions arise on how to promote reflection and understanding of this and other community practices that reflect equity and justice for all members of the community.

2. The Essential Activities

2.1. Connection between the Organization and the Families

There is a history of more than 25 years between CEADB and several communities of the highlands of Bolivia, among those communities are Pasto Grande, Mujlli, Yauritotora, Kullpaña and Jachapampa in the province of Tapacarí. They have developed local initiatives such as water and soil conservation, appropriate technology research and application (i.e., fish farming, biogas, solar greenhouses). In the last five years, three community educators (Aymara and Quechua descendents), have mutually built a relationship of trust and respect with the communities, and have conversed about educational issues. In many occasions, the members of communities have visited the CEADB locations (outside of the city of Cochabamba) and have taken part in the courses and trainings on environmental issues. This smooth process of getting to know the community and its problems, needs, and strengths makes an ideal situation for a participatory program. There are no recruitment needs or strategies for approaching the community. The communities are ready to deal with educational issues that will also reach their social and political spheres.

2.2. Creating and Implementing Materials:

There are some elements to keep in mind at the time of developing the contents of the program, these include: a preliminary research for defining *the needs* of the particular groups (i.e., parents and children) and delineating an appropriate set of *educational objectives* for each group. The objectives should be defined with the participants so they reflect the needs and relevancy of the participants' lives. As far as possible, all *educational experiences* should take into account the learners' interests and be designed to develop their sense of observation and analysis of the elements constituting their everyday life. The emphasis on the content should be on *raising motivation* and personal initiative levels, sharpening their *sense of curiosity and experimentation*, building their *confidence* in their own capacities, knowledge and common sense, and strengthening their *sense of loving care* for their children and *community responsibility*. The overarching principle is that both individual learners and

families are part of a systemic process of enriching their way of living and interacting with each other.

The format of the implementation component has three steps that works in a circle, in other words, it is an ongoing process of researching, creating, implementing (during the course work and at the home/community) and evaluating:

The first step is ***Research and Consultation***: The community workers and I (who will coordinate the design of the materials) through informal conversations with the participants in their own communities, gather information about ideas, needs, priorities, and worries about the content to be discussed in the course sessions, etc. During the month of June and part of July of 2000, the working-team developed the first step (there is a great accumulation of data from observations, conversations and informal interviews with the participants collected throughout the last five years).

The second step is ***The Series of One-Week Courses:*** Parents and children come according to their seasonal calendar to the CEADB training site in the community of Abra (near Cochabamba) and take part in the course (which involves activities for parents and children). The section below on implementing key components describes in detail some of the topics. Soon after the first step was partially completed, in early August 2000, we had a one week-course that focused on creating a stimulating home environment. This course served also as training for the facilitators (the community workers) and I conducted the training while facilitating the course for the participants.

The third and last step on the process of the implementation is ***The Follow-Up*** or post-course activities. The community workers visit again the communities and emphasize the concepts, activities and experiences provided during the course.

The facilitation and training follow the participatory and learner-centered model; therefore there are many hands-on activities and practical exercises to prepare, discuss and complement. In the months of July and August of 2000, we reviewed the first course (created in 1997) and created a new set of materials for the second course. The facilitators in training participated as regular learners keeping in mind possible questions and suggestions that arose at the end of the day. There were especial sessions to assess the learning process of the day.

The follow-up process is designed to create a continuum in the learning process, so it does not begin with the one-week course but instead precedes it and continues at

their homes and communities. The community workers play a very important role in leading steps 1 and 3 with the community learners.

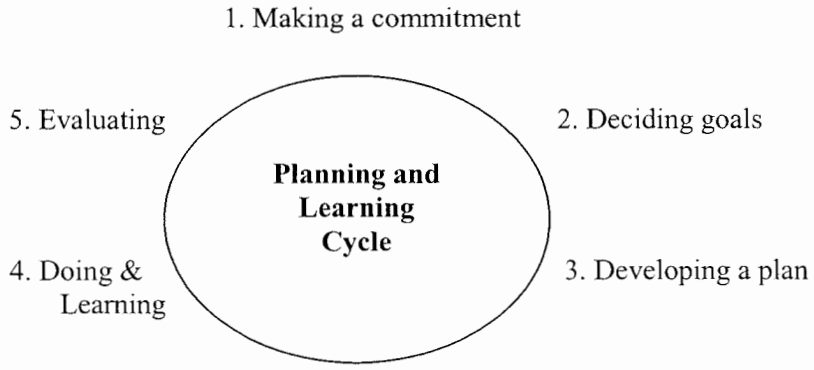
3. Implementing Key Components

Based on the needs and expectations that the participants of the program shared at the beginning of the consultation process. I have created four integral components for the Family Literacy Program. The following four themes are the units for the one-week course series and their systematic follow-ups.

3.1. Adult Education

This section of the program content is based on a Theoretical – Practical dynamic, where the "*How*" is defined by reading and writing skills, while the "What" involves understanding their own lives in a socio-cultural context. The model of adult education is based on the liberal theories of education (i.e., Paulo Freire and his collaborator's work), where literacy is a means of acquiring the understanding and ability necessary to improve living conditions.

The process of learning in this program is based on the research of Kolb (1981) on experiential learning that sees adult learning as a planning/learning cycle, with 5 stages:



The learning cycle, which supports the learner-centered approach, consists of adults guiding their own process of learning by first making a commitment (of time, effort, giving up other activities, etc.) then, deciding their own goals, while requires assessing their own needs. Learners should ask themselves questions such as what

would you like to be like in the future? And in what ways do you need reading and writing to meet those life goals? (Gillespie, 1990). The third stage is developing a plan, which focuses on the "How" questions and implies the definition of activities that the learners need to follow in order to reach the goals. The fourth stage is learning and doing, which entails exploring the variety of actions and environments where learning takes place. The last stage is evaluating their own learning process that is a continuum during the program. It is reassuring to make an account of the steps that the learners have been taken in order to achieve the aims of the program.

3.1.1 A Sample of Adult Education Activities:

Dixon and Cohen, (1996) suggest some activities that promote the use of literacy in home and community as a way to preserve roots history. One activity is Family Memories: Rural communities usually do not have pictorial records but they know stories, proverbs, songs that have been kept and maintained through generations. Making family trees and writing descriptions (physical and personal) of members of family help to keep the history of the family. These activities can be held for children and parents in a participatory learning as well as an activity between families, where members can exchange stories and community traditions.

3.2. Children Education

The goal of early childhood education is to provide developmental experiences in order to stimulate an enriching learning process at home, at the community and at school.

Children learn about the world through active experimentation and interaction with people and objects. The following is a basic list of activities to develop with the children during the one-week course:

- Physical exercise that improves coordination and confidently use their bodies, to provide an appropriate channel for using their energy.

- Cognitive activities that provide stimulation on intellectual capacities such as experimentation and analysis.

- Meaningful communication that promotes the natural development of language.

- Social skill activities that encourage the learning of cooperating, helping and solving interpersonal problems through dialogue.

3.3. Parents/Children Interaction

The main goal of the interaction between children and parents is to provide a space in their lives where they learn together. These learning interactions should occur naturally and on a daily basis, and both fathers and mothers should find their own ways on how to enjoy these daily learning with their children; therefore any methodology of activities that enrich parents-children interaction requires qualities such as: experiential, hands-on, fun and meaningful (according to the children' age, interests, etc.).

3.3.1. A Sample of Parents - Children Interaction Activities

Dixon and Cohen (1996) suggest several action-learning activities for families and communities, that promote cultural and familiar identity, these include: family diagrams, family literacy surveys, family histories, local knowledge and community mapping.

Rogers and Reiff, (1995) suggest activities to develop parents - children interaction in open environments, using the own environment and cultural elements, such contemplate their own environment by recognizing elements from the surrounding environment, adults and children have discussions about observations. Children will gain and enrich concepts through multi-sensory experiencing. Involved in creative thinking and responding through organizing, elaborating, and expressing thoughts (constructing meanings) as they paint and draw pictures.

Another activity is playing to write independently, which gives value on children's expressions of personal thoughts and feelings, whether they are dictated or writing independently. Children appreciate enthusiastically to dictate their thoughts to an adult who prints them and discuss details. Reading their own thoughts or those of friends is another activity that parents can enjoy with their children. Children are highly motivated to read acquainted stories and they prefer such stories rather than printed stories from the handbooks or evensongs composed by friends. Meaning and comprehension are built since those stories and songs reflect similar interests and shared activities.

Another suggested activity is related to poems, songs, and short stories for children. Children appreciate the opportunities for learning that encourage their self.-progress. Children learn early on to identify their written name, therefore, reading titles, like Ignacio's song quickly grasped the fact that the story belongs to themselves.

For order children, Archer & Cottingham (1996) suggest an activity called "Roles, gender and children in the community, where family constructs two calendars with the months or seasons –one for girls and one for boys- and they consider how much children work and the relationship to gender. A brainstorm about activities that children carry out on daily bases (such as selling food, collecting water, herding) will be a helpful way to analyze the participation of children in community activities.

Some ideas for discussion could be:

- Which is the busiest period for girls? Is the same for adult women?
- Which is the busiest period for boys? Is the same for adult men?
- What do learn from the work that they do? What do boys learn?
- Have there been any changes in the work girls/boys do over the last 10-20 years?
- Is there a good balance of work between girls and boys?
- What is the effect of working on girls' education and boys' education?
- How many children are desirable in a family, and of what age and gender?

3.4. Parenting Education

The goal for fathers and mothers is to reinforce their role as the main educators of their children and leaders of the family. The parents are encouraged to shape their behavior patterns, skills and knowledge necessary to function effectively in the task of raising children. It is important for parents to understand how their own actions shape the lives of their children in all major areas: health, safety, education, self-image, attitudes, values, etc. On the other hand, parents are the ones who make the decisions and are the source of protection, provision and discipline. Another goal is to realize the importance of sustaining a healthy family, which implies a space where children supply the intrinsic need for belonging; therefore with the family "the child is an integral, irreplaceable part of a group of loving people on whom he/she can depend and who will always care about what he/she does and how he/she is feeling" (Pruitt, 1998, pp. 198).

The range of possibilities for themes, activities and experiences to develop in parenting education is fairly extensive, I point out Machmeier's, (1993) suggestions in a comprehensive set of parenting educational sessions:

1. Child development:
    a. Factors that influence growth and development
    b. Areas of development and appropriate expectations
    c. Role of play in development
2. Guiding children's behavior:
    a. Communicating positively
    b. Encouraging and building self-esteem
    c. Effective discipline
    d. Problem solving
3. Learning and readiness:
    a. Encouraging readiness skills in reading, writing, etc.
    b. Understanding learning problems
    c. Being aware of the effect of television on families (even in the countryside in Bolivia, if there is access to electricity, it is likely that people will have a TV at home).
    d. Developing a partnership with schools and teachers
4. Healthy families:
    a. Traits of a healthy family
    b. Coping with stress and building positive relationships
    c. Dealing with abuse
    d. Using community resources
    e. Providing good health, nutrition and safety

4. Organization

In general, organization and management play a great deal in the success of any program. There are multiple dimensions in family literacy programs that will in turn affect directly or indirectly the life of families and community environments for a long time; a person who becomes literate can not go back and erase the learning process.

Therefore, there is a great responsibility in developing carefully the steps that a literacy program will take.

4.1. Coordination of the Program

In an overall structure, the role of a coordinator is crucial in order to maintain the big picture of the program, and will ensure that each of the dimensions of the program promotes harmony for the entire system. The involvement of the participants in the organizational structure is another aspect to consider in a non-traditional family literacy program[16]. Learners become the facilitators of their own learning process as adults and as parents. Therefore, if the participants have the opportunity to take an active part in the organizational efforts, it will in turn ensure the sense of belonging the program has to a group of local people or a community. This, in turn, could be seen as a sustainable program.

In the case of this family literacy program, given the way of how the Aymara communities carry out their governance, I would recommend a governing body that is grounded on the community and develops a grassroots administration, and the governing body would include at least one person who represents CEADB.

4.2. Collaborative Relationships

Another aspect of organizing a family literacy program is the need for networking and partnerships. When organizations attempt to work together at both the local and national levels, it appears that two types of collaboration strategies are important--strategies organizations use to develop relationships, and the communication mechanisms that are used to sustain these relationships. An initial step that organizations take in developing a collaborative relationship is to determine the benefits and costs of exchanging resources, information, or services.

The phase of networking for this program is still in its infancy, and there is a need for finding systematically local and national resources, services and funding.

[16] For non-traditional family literacy program, I refer to a program that is based on participatory methodologies, learner-centered approaches, and promote raising awareness as one of its main goals.

5. Assessment and Evaluation

Program evaluation is often seen as an overwhelming task that involves tedious analysis of each single element of the program that is determined by an external and temporary participant, but in fact, the evaluation process could carry out interesting dynamics that could allow participants and staff to get involved in the review of their work-in-progress and check their expectations, outcomes and success trends.

In this family literacy program, there are some elements that the participants should assess: goals, key components, network processes, and essential activities of the program, as well as a governing body and coordination, and procedures for evaluation. Another element to be considered for the evaluation process could be the consistency of the theoretical principles for changing the literacy attributes of the families.

D. Conclusion

The exercise of describing the study surfaces my own realization of how comprehensive a family literacy program is, given it involves so many elements from diverse origins: from the funding restraints to the socio-cultural impacts of the program, but the underlying aspect of all is the meaning of developing a program that nurtures the seeds of a society, the children, and supports the growth of the basic human unit, the family.

Chapter 5

Final Thoughts and Conclusion

I would like to begin this section of the study with some facts on literacy in Bolivia: The total population of rural Bolivia in the 1992 was 42%, for a total of 2,730.000 individuals approximately. The rural population of the department of Cochabamba was around 530,000 and of these, 263,400 were women (Montes de Oca, 1997). The Bolivian 1992 census also reported that the national illiteracy average rate was 20%, a figure that is higher than the Latin American average, which is 15.2% (INE and ONAMFA, 1993). However, in 1998 the national illiteracy rate was calculated at 13% (INE, 1999). Where women's illiteracy rate was 27% compared to men's' at 11%. Rural women's illiteracy rate was 49% compared to 23% for rural men (INE and ONAMFA, 1993). Despite these relatively low illiteracy rates (though higher than the Latin American average), the functional literacy rate in the whole country was estimated at 35% in 1992. 55% of the rural schools offered up to third grade because of the deficit in the teacher's pay (Montes de Oca, 1997).

An analysis of the educational situation in Bolivia shows that learners do not continue with their schooling process in part due to poverty and the foregone opportunity costs associated with school as well as a very poor educational system that hardly helps the learner succeed. Montes de Oca, (1997) reports that given learner's drop out or repeat rates, it takes an average of 12 years to complete six elementary grades. In practice, students will oftentimes never return to school.

In Bolivia, despite the poor access to the materialistic well-being that consumes other areas of the world, the Bolivian highlands still receives the impacts of the prevalent model. Examples go from the introduction of fertilizers and tractors in agriculture to neo-liberal policies that affect the national educational system. The Bolivian government considers social investment as a great for potential tapping into the natural abilities of the population, ensure sustainable development, consolidate proposed changes, and strengthen the democratic political system (Andrade and Balcazar, 1995). This statement could define the longing for progress proposed three centuries ago,

nevertheless, the highlanders barely obtain the basic necessities for life, water is scarce, health services are deplorable, and education is just a tool that brings on much disappointment. Poverty, unhealthy environment and life's precarious conditions in rural Bolivian communities are the main reasons for rampant infection, illness, and maternal and child mortality (Castellón, 1997). Rural people are disallowed to attend schools, given the restricted conditions, teachers are not paid and schools lack material resources. The only motivation to finish school or at least to attend school is the opportunity for gaining skills in order to compete in the market and move out to the nearest city.

Educators need to create an environment where learning is deeply and well rooted in a community of learning, where meaning is the seed and service is the fruit. We as educators in the United States, in New Zealand or in Bolivia need to embody a pedagogy and epistemology that is deep-seated in a new paradigm that conceives the universe as systemic and interconnected. A paradigm that considers mutual and sustainable interdependency of all living systems, that partnership is essential to any endurable community, that learning is being, not content, that sacredness is instilled in every human act. A paradigm that preserves the diversity of humankind as the thread that weaves the richness of social fabric, translated in languages, ethnic traditions, popular knowledge, the spirit of arts, and other ways of learning and expressing the personal and collective relationship with others.

A. Importance of the Key Components of the Family Literacy Program

Family literacy is a great approach for promoting another kind of education, one that is truly focused on the learner –in this case, the members of the nuclear family-, which is centered in their own interests, expectations and cultural context. Smaller literacy programs that encourage few families to create their own learning space at home and are supported by the community tend to be more successful than a large and ambitious program promoted by the national government with the aim of "eradicating illiteracy".

Parenting and adult education take on a special significance within an ecological systems model where education is an important source for the elaboration of adult/parental conceptions on the nature and capacities for both children and adults at

successive stages of life. On the other hand, parent-child interactions are important to a child's developing literacy abilities. It is increasingly clearer that such interactions involve a much more than simply reading to children and providing them with books. In fact, there is some evidence to suggest that simply telling a parent to read to a child may lead to quite different behaviors depending upon the background of the parent. Some of these behaviors may even be counter-productive. In addition, a growing body of research indicates that the way in which a parent speaks with a child may have as much or more to do with the child's later reading achievement than actual time spent reading to the child.

Educators disagree about what is to be done with this information. Some suggest that the information be ignored, since it implies low-income parents may in some way be deficient. It is better to focus upon literacy instruction designed to give parents more control over their world. If this is done, all else will follow. Others point to successes in teaching literacy and parenting strategies to new parents and point out that many parents want to know how to improve the literacy of their children. A middle ground is possible, but only if the issue of parent-child interactions is addressed with a great sensitivity, tact, and respect for all concerned. Rather than directly teaching new ways for parents and children to interact with language and literacy, an interactive approach involves generating opportunities for discussion, modeling, and practices as well as time, energy, and talent.

B. Basic Principles of the Curriculum Framework of the Family Literacy Program

Some of the main principles were outlined in the previous pages and referred to the content of the program. In this final chapter of the study, I will spend some time defining various focal points that make sense given the reality of Aymara families, which in turn can lead to further development of this literacy program.

1. Unity in Diversity

In a world where the inhabitants are known by others[17], it is easy to recognize there are as many ways to perform activities, to relate to others, to understand social problems, and to practice rituals, as there are people and cultures on earth. Therefore, education needs to affirm this plurality and multifaceted way of understanding existence. At an individual level, (Arbab, 1993, p. 4) suggests:

> They will have to aim constantly to express more fully the virtues inherent in humankind, and weed out faults, harmful habits and tendencies inherited from the environment. Yet they will have to be conscious of the unique characteristics and contributions of their own nation and people and dedicate themselves to the enrichment and advancement of their own culture.

This principle does not encourage uniformity as a unique way of performing, having the same form, manners or degrees that brings absolutism and rejection to any difference. Instead, this principle encourages unity when the generality "have a common understanding of the causes of disunity and a collective commitment to practicing a way of life that eradicates such causes and hindrances" (Ayman, 1993; pp. 18).

2. The Search for Meaning and Sense of Purpose

Caine and Caine (1997) propose that the search for meaning is innate. Our mind/brain organizes stimuli from the environment and creates patterns, which make sense to our experiences. Hence, our needs, values, beliefs and experiences are based on a sense for quest. The search for patterning is effective when learning is a transformative experience that has a meaning for us. Making sense of our moral purpose as individuals and as a society is a transformative process. According to Arbab (1993, p. 5):

> On a personal level, it is directed towards the development of one's vast potentialities, including both those virtues and qualities that distinguish the human race and those

[17] The arrival of Christopher Columbus to the new land, called America, five hundred years, installed a new sense and understandings of the world. Nowadays it is not surprising to be in a little school in the highlands of Bolivia and talk to 12-year old children about China and its ancient emperors!

talents and characteristics that are an individual's unique endowment. On a social level, it is expressed through dedication and promotion of the welfare of the entire human race."

It is essential, that we as educators promote the awareness of the reciprocal relationship between personal growth and organic change of social structures. When the learners are connected to the community, that reciprocal relationship takes place. Promoting service as a way of learning should then be one of the priorities within an education based on spirituality.

The search for meaning is often looked at as the sense of happiness. The risk is, how do you determine what is not a pernicious path, such as addiction? The distinction lies in the human existence, where we envision is one that extends beyond the exigencies of today. This vision enables us to distinguish between trivial and hedonistic life as well as from the lasting, constructive, and complex life. Therefore, the search for meaning takes another route when we discover how it is meaningful to us, what makes us happy, what helps us to develop our potentialities, and what transcends when it is connected to serving and working with others throughout life's existence.

3. An Inner Appreciation of Interconnectedness:

The relationships and patterns between people, people and institutions, people and other living systems are all essential to conceiving a systemic curriculum based on spirituality. By analyzing the complexity of the world we can understand the principle of interconnectedness, however, understanding and reasoning are not the only paths to learning. Palmer (1993) argues "the knower must have some inner capacity to receive the known if knowledge is to result from their encounter. (...) but what are the capacities or instruments that enable us is to know the world? (p. 52). He says that objectivism will argue that our sense organs and minds can relate the knowing objects to our rational and logical patterning system. Later, he questions why the logical pattern will be the only channel that connects ourselves with the world? Why then do we have intuition, emotions, feelings and faith? Caine and Caine (1997) refer to the need to have a sufficiently large vision and imagination to see how specifics relate to each other.

This principle of interconnectedness teaches us that we are not the maxi and only living beings that share this known environment. It teaches us that every action we take will have an effect or impact on the patterns of interconnections with other systems. It teaches us, that we sustain all kinds of relationships by using logic and rationality but the key lesson is that there are other dimensions to establishing such relationships. Palmer invites us to keep watching other dimensions:

> "The relationships of the self require not only sensory evidence of the other; nor only logical linkages of cause and effect; they also require inner understanding of the other, which comes from empathy; a sense of the other's value, which comes from love; a feel for its origins and ends, which comes from faith; and a respect for its integrity and selfhood, which comes from respecting our own" (Palmer, 1993, p. 53).

On the other hand, between relationships it is important to highlight the family structures as a key for social transformation. Family represents the creative cell that originates new life, bringing a nurturing environment to perpetuate or change models of behavior within the whole entity. As an example, the perpetuation of male dominance in family affairs will be translated not only to the offspring but also to society. Arbab (1993) affirms: "Strong and healthy family bonds are needed to make family a vital unit of society (...) it becomes the first environment where nobility, integrity, respect, generosity love, unity and justice are learned by every human being" (p. 11). Education does not occur in a classroom only, learning occurs everywhere. Thus, educators should be aware of the importance of breaking the gap between school and home, having parents and the whole community supporting the learning process, where boundaries and compartments are eliminated.

4. Imbuing the principles into practice

A poignant question at this stage in the reflection process includes: how to develop an environment where teachers, parents, learners and the community define a curriculum that responds to their own needs, strengths, interests, and values in the context of Bolivia?

The basic foundations of the Bolivian formal educational system as presented in the 1994 Educational Reform Bill promotes learner-centered learning, popular

participation and multiculturalism, all key points that would make real the basis for "reconstructing a new society." Reality though, shows that there are no clear plans for actions. In the mean time, public schools still deal with the same problems they dealt twenty years ago. The issues of under subsidized teacher salaries, lack of classrooms resources, lack of free access to education nationwide, and many others are among the unsubstantiated goals the reform proposes. Moreover, there are no consistent efforts for curriculum planning based on these new principles, and the educational community does not seem motivated to create a new dialogue or understanding with the educational reform.

As a response from groups interested in peoples' education, some NGO's, the Catholic Church, other religious groups, and private organizations have formulated plans and new strategies for bringing literacy programs, basic education and non-formal education to the Bolivia countryside. However, the aspirations of the indigenous people is an education where all students, regardless of race, class, and gender are treated as individuals who can learn successfully; where basic needs (health, nutrition, housing) are cared for; where engaging conversations and story telling are part of the process of learning; where a sense of community is fostered, and all members of the community can learn together; where contributions of students from different indigenous backgrounds are valued as contributing to an honest history; and where economic resources are provided for maintaining the school system.

C. Connecting Movements to Transform Curriculum:

Reframing education in the context of indigenous communities might result in a reencounter with the traditional native education, which was replaced by the positivist education and the dominance of the mechanistic worldview. The new claim for an indigenous education is enriched from the new understandings of how the social fabric and its dynamics work. The amalgam of principles of movements such as ecology of indigenous education (Cajete, 1994), a new scientific understanding of living systems (Capra, 1996), holistic education (Harris, 1980), and spiritual education (Palmer, 1993), among others has an incredible potential for a transformative education.

1. Participatory Curriculum[18]:

Traditional knowledge (indigenous knowledge) and new learning theories coincide in the great potential of learning in community, where all the learners have a place to express themselves, and there is a mutual understanding and cooperation among themselves. Mutual learning emphasizes a deep understanding of the relationship between facilitators and participants as a nurturing relationship. This notion is comparable to "wisdom in the Andean life: nurturing is allowing oneself to be nurtured" (Rengifo, 1998, p. 175). Mutual learning is also sustained by the understanding of the Andean cosmovision that conceives of "a living world where one is part of nature, with everyone being important in its re-creation" (Rengifo, 1998, p. 189).

Participatory curriculum is an educational practice that invites learners and their community to reflect on their own needs, and altogether create the means for sustaining the community. Therefore, curriculum is not imposed in a top-down model from administrators or teachers but rather as a source for learning and enrichment of the whole community. The role of learners is to ensure that the meaning of the action is taking place. The role of teachers is to facilitate the process. They are also participants of the process because they are part of the community.

[18] A methodological approach to develop a participatory curriculum could be participatory research, though considering its political dimension. The epistemological roots of participatory research are deeply seated on social change that seeks for a progressive transformation of the people's environment and their own praxis. Researchers who defend this approach, strongly argue that social change needs to be born from people, collectively; and not from the imperialistic entities who decide what is good or not for the community or what "has" to be done in the name of development. As a political process, according to Fals Borda & Rodrigues (1986), participatory action research (PAR) advocates recognize "that no research is value-free, that it seeks to examine (and critique) the structures of power which oppress people and communities through its three-part process of social investigation, education, and sociopolitical action" Fals Borda & Rodrigues (1986, p. 3). However, when this approach is presented openly, it could bring-on threats and animosities from the stakeholders. On the contrary, a community based participatory research process should be a source of building linkages and complementary coalitions, as Stringer (1999) suggests.

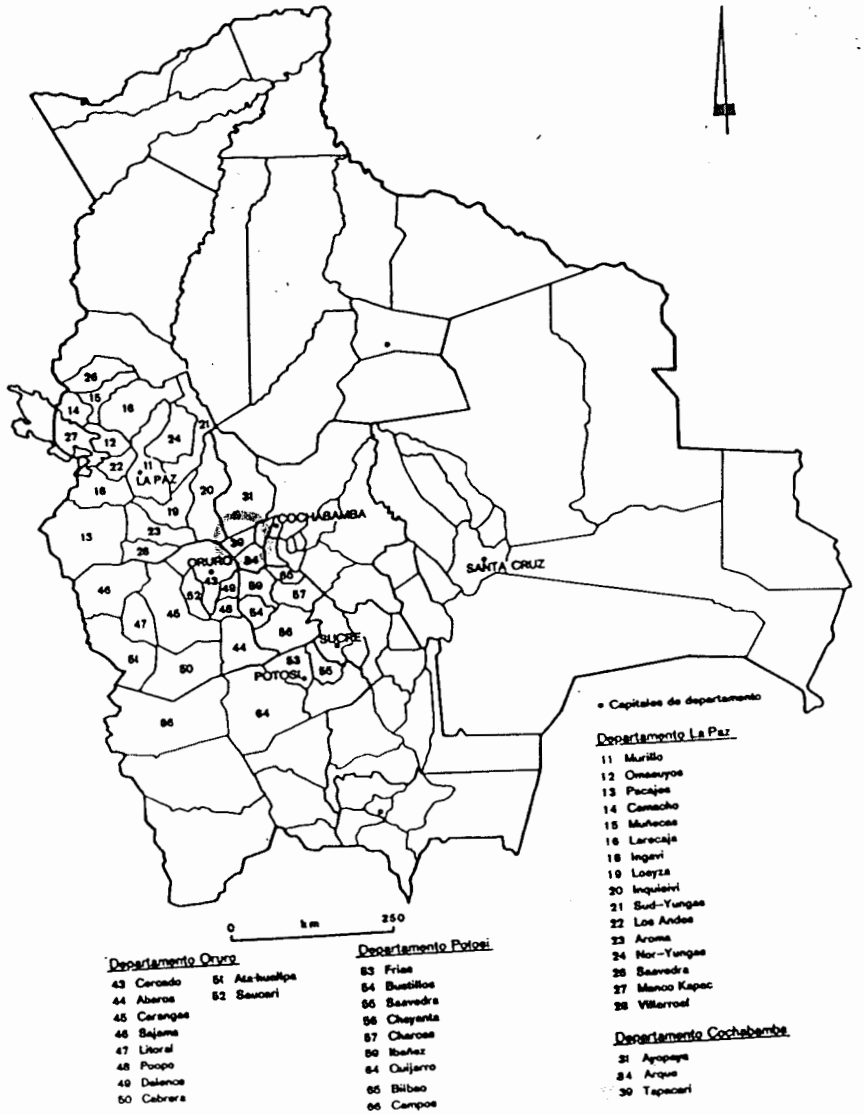
Appendix 1

Map of South America and the Aymara Zone

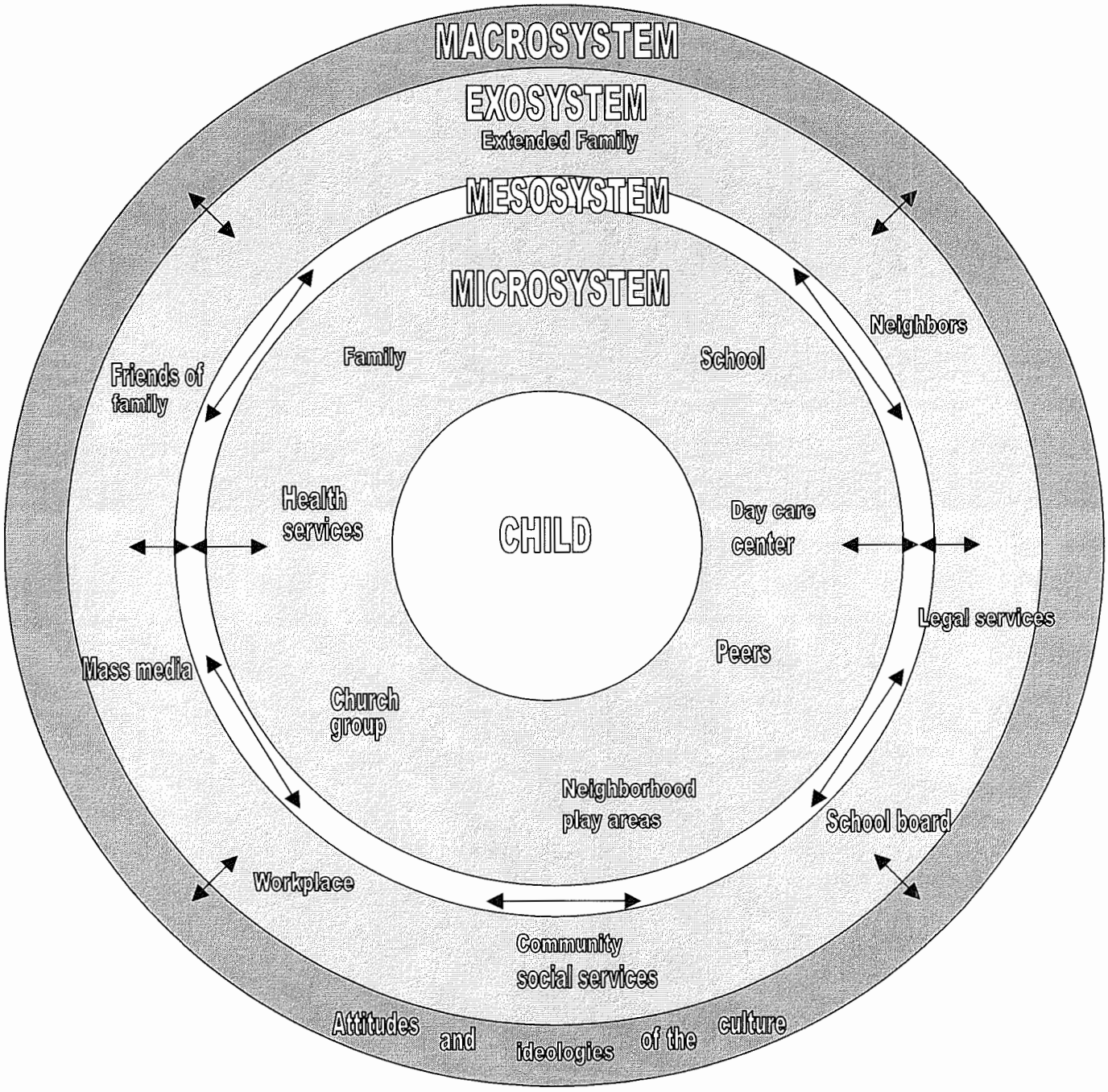
(Source: http://aymara.org/mapa/aymapa.html)

Appendix 2

Map of the distribution of Aymara speakers in the Bolivia



Appendix 3



NOTE: According to Bronfenbrenner, various ecological systems interact with each other to influence child development.

SOURCE: Adapted from Kopp & Krakow (1982). *Child Development in Social Context.*

References

Albó, X. (1988). *Raíces de América: El Mundo Aymara*. Madrid, España: Alianza America / UNESCO.

Albó, X. (1998). *Quechuas y Aymaras: Pueblos indígenas y originarios de Bolivia*. La Paz, Bolivia: Ministro de Desarrollo Sostenible y Planificación; Viceministerio de Asuntos Indígenas y Pueblos Originarios; Programa Indígena-PNUD.

Andrade, L. & Balcazar. G. (1995). *Manual para Interpretación Sistémica de la Ley de la reforma Educativa en Bolivia*. Santa Cruz, Bolivia: Laser Print.

Apffel-Marglin, F., with PRATEC (1996) (Eds.). *The spirit of regeneration: Andean culture confronting western notions of development*. London: Zed Books.

Arbab, F. (1993) Living in a Rapidly and Changing Society: Transition to Maturity. In Ayman, I. (Ed). *A New Framework for Moral Education.* Switzerland: Landegg Academy.

Ayman, I. (1993) *A New Framework for Moral Education.* Switzerland: Landegg Academy.

Archer, D. & Cottingham, S. (1996*) Regenerated Freirean Literacy through Empowering Community Techniques*. London: ACTIONAID

Auerbach, E. (1995). Which Way for Family Literacy: Intervention or Empowerment? In Mandell, L. (ed.). *Family Literacy Connections in Schools and Communities.* Newark, Delaware: International Reading Association.

Auerbach, E. (1989). Toward a Social-Contextual Approach to Family Literacy. *Harvard Educational Review.* Vol. 59 (2): 391-408.

Begley, S. (1996). Your Child's Brain. *Newsweek,* February 9, 1996, compiled by 21st Century Learning Initiative.

Bhola, H. (1994) Family Literacy for Development: Clarifying conceptions for appropriate actions. In *World Symposium of Family Literacy*. Bloomington, IN: Indiana University.

Boron, A. & Torres, C. (1996). The Impact of Neoliberal Restructuring on Education and Poverty in Latin America. *The Alberta Journal of Educational Research*. LXII, No. 2, June: 102-114.

Bronfenbrenner, U. (1986). Ecology of the Family. *Developmental Psychology* Vol. 22, No. 6, 723-742.

Buechler, H. & Buechler, J. (1971) *The Bolivian Aymara*. New York: Holt, Rinehart and Winston, Inc.

Caine, R. & Caine, G. (1997). *Education on the Edge of the Possibilty*. Alexandria, Virginia: ASCD.

Cajete, G. (1994). *Look to the mountain: An ecology of indigenous education*. Skyland, NC: Kivaki Press.

Canqui, H. B. (1990). *Estudio Agrológico de las Comunidades de Belén y Tolama de la Provincia de Cercado del Departamento de Oruro*. Tesis de Grado para la Facultad de Ciencias Agrícolas, Universidad Tecnica de Oruro, Bolivia.

Capra, F. (1996) *The Web of Life*. New York: Anchor Books

Castellón, I. (1997) *Abril es Tiempo de Kharisiris: Campesinos y Médicos en Comunidades Andino-Quechuas*. Cochabamba, Bolivia: Editorial Serrano

Cleveland, J. (1994). Learning at the Edge of Chaos: Applying Complex System Theory to the Transformation of Learning. *The Chaos Network*, August, 1994.

Coraggio, J. (1997). Education Policy and Human Development in the Latin American City. In Torres, C.A. & Puiggrós. *A Latin American Education: comparative perspectives*. Boulder, CO: Westview Press.

Creswell, J. (1994). *Research Design: Qualitative and Quantitative Approaches.* Thousand Oaks, London, New Delhi: Sage Publications.

Creswell, J. (1998). *Qualitative Inquiry and Research Design: Choosing Among Five Traditions.* Thousand Oaks, CA: Sage.

Dixon J. & Cohen, J. (1996). *Literacy & Learning in Families and Communities: Action-Learning Manual, A Guide for Literacy Practitioners.* Amherst, MA: The Literacy Linakge Program / The Center for International Education / Research Center for Educational Innovation and Development/

Dworetzky, J. (1981). *Introduction to Child Development.* St. Paul, MN: West Publishing Company.

Eisner, E. (1982). *Cognition and the Curriculum.* New York: Longman.

Erikson, E. (1963). *Childhood and Society.* (2nd ed.). New York: Norton.

Erikson, E. (1982). *The Life Cycle Completed: A Review.* New York: Norton.

Fabes, C. & Martin, L. (2000). *Exploring Child Development: Transactions and Transformations.* Boston: Allyn and Bacon.

Fordham, P. (1994) Language Choice. In Barton, D. (ed.) *Sustaining Local Literacies.* London; New York : Routledge

Freire, P. (1970). *Pedagogy of the oppressed.* New York: Seabury Press.

Freire, P. (1985). *The Politics of Education: Culture, Power and Liberation.* Hadley, MA: Bergin & Garvey.

Gabler C & Goethel, J. (1996). *The Path to Family Literacy.* Eau Claire, Wisconsin: Steck-Vaughn, in cooperation with National Center for Family Literacy and Literacy Volunteers of America-Chippewa Valley.

Gareca, V. L. (1992). *Inventariación y Evaluación de las Praderas Nativas del Fundo Condoriri.* Tesis de Grado para la Facultad de Ciencias Agrícolas, Universidad

Técnica de Oruro, Bolivia.

Gee, J. (1990) *Social Linguistics and Literacies: Ideology for Discourses.* London: Falmer Press.

Genge, C. (1999). *The Bolivian Agrarian Reform: a general grounding on its origins and outcomes*. Political Science 777, 24 April. University of Massachusetts, Amherst.

Gillespie, M. (1990). *Many Literacies: Modules for Training Adult Beginning Readers and Tutors*. Amherst, MA: Read/Write/Now Adult Learning Center. Center for International Education.

Gutierréz P., Z, and Cardona O., S. (1998). Etnicidad, genero y riego; Hacer chacra: La colectividad en el riego en sistemas del altiplano de Oruro (Ethnicity, gender and irrigation; Making chacra: The collectivity in the irrigation Oruro altiplano systems). In Sanchéz, L. (1998) (Ed.). *Informe del taller de genero, regeneración y biodiversidad – Vinto, 15 al 18 de Junio (Procedings to the workshop on gender, regeneration and biodiversity – Vinto, 15 to 18 of June)* (pp. 166-181). Cochabamba, Bolivia: Cai Pacha.

Hall, E. (1989) *Beyond Culture*. New York: Anchor Books.

Hammond, J. (1998) *Fighting to learn: Popular Education and Guerrilla War in El Salvador*. Piscataway, NJ: Rutgers University Press.

Hardman, M. (1988). Jaqi Aru: La Lengua Humana. In Albó, X. (1998). *Raíces de América: El Mundo Aymara*. Madrid, España: Alianza America / UNESCO.

Harris, A. (1980). *Mind, Evolution or Revolution: The Emergence of Holistic Education.* Conference Papers. Del Mar, CA: Network.

Helms, D. & Turner, J. (1986). *Exploring Child Behavior.* (3rd. ed.). Monterrey, CA: Brooks/Cole Publishing Company.

Huarachi, S. (1992). La sociedad aymara: Sistemas y estructuras sociales en los Andes (Aymara society: Social structure and systems in the Andes). In van den Berg, H., and Schiffers, N. (Eds.). *La cosmovision aymara (Aymara cosmology)*. La Paz, Bolivia: UCB-Hisbol.

Instituto Nacional de Estadistica (INE) and Organismo Nacional del Menor, Mujer y

Familia (ONAMFA), (1993) *Situación de la Mujer en Bolivia: Algunos Indicadores*. La Paz: Sistema de Información Social.

Instituto Nacional de Estadisticas (INE) (1999) Statistics Report of Bolivia. On the web at *www.ine.org.bolivia.html* [Dec. 13, 2000].

Kolata, A. (1996). *Valley of the Spirits: A Journey into the Lost Realm of the Aymara.* New York: John Wiley & Sons, Inc.

Kolb, D. (1981). Learning Styles and Disciplinary Differences. In Gillespie, M. (1990). Amherst, MA, Center for International Education.

Llanque, D. (1990) *La Cultura Aymara: Desestructuración o Afirmación de Identidad.* Lima: Ediciones Idea & Tarea

Layme, F. (1992). El Idioma Aymara. In van den Berg & Schiffers, (1992) (Ed.) *La Cosmovisión Andina*. La Paz, Bolivia: UCB/Hisbol.

Lewis, M. (1993). Self-conscious emotions: Embarrassment, Pride, Shame and Guilt. *In* Lewis, M. & Haviland, J. (Eds.). *Handbook of Emotions* (pp. 563-573). New York: Guildford.

Marshall, C. & Rossman, G. (1999). *Design Qualitative Research* (3r. ed.). Thousand Oaks, London New Delhi: Sage Publications.

Machmeier, K. (1993). Developing and Implementing a Broad-Based Parenting Program in Family Literacy. In McNaughton, S. (1996). *Patterns of Emergent Literacy: Processes of Development and Transition*. Auckland, New Zealand: Oxford University Press.

McNaughton, S. (1996). *Patterns of Emergent Literacy: Processes of Development and Transition*. Auckland, New Zealand: Oxford University Press.

Montes de Oca, I. (1997) *Geografía y Recursos Naturales de Bolivia*. La Paz: EDOBOL.

Nash, M. (1997). Fertile Minds. *Time Magazine*. February 3, 1997; compiled by 21st Century Learning Initiative.

Nedler, S. & McAfee, O. (1979) *Working with Parents: Guidelines for Early Childhood and Elementary Teachers*. Belmont, CA: Wadsworth

Osborne, H. (1952). *Indians of the Andes: Aymaras and Quechuas*. Cambridge, MA: Harvard University Press.

Palmer, P. (1993) To Know As We Are Known: Education As a spiritual Journey. New York, NY: HarperCollins Publishers.

Pedraza, J. (2000). *Aymara uta: jaya mara aru.* Aymara org. http://aymara.org/english/faq.html [December 25, 2000].

Pérez, S. (1993) *Mujer Campesina, Niños y Educación.* Quito: Ediciones Abya-Yala

Piaget, J. (1952). *The Origins of Intelligence*. New York: International Universities Press.

Portugal, J. (1988). *El Niño Indigena*. Lima, Perú: Concytec & Artex Editores.

Pruit, D. (1998). *Your Child: What Every Parent Needs to Know About Childhood Development from Birth to Adolescence*. New York: HarperCollins Publishers, Inc.

Rahnema, M. (1976) Literacy: for reading the word or the world. In Bataille, L. (ed.) *A Turning Point for Literacy.* Oxford: Pergamon Press.

Rengifo, G. (1996). Development or cultural affirmation in the Andes? In Apffel-Marglin, F., with PRATEC (Eds.). *The spirit of regeneration: Andean culture confronting western notions of development*. London: Zed Books.

Robinson, C. (1994) Language Choice. In Barton, D. (ed.) *Sustaining Local Literacies.* London; New York : Routledge

Rogers, L. & Reiff, J. (1995) *Early Childhood Curriculum: Open Structures for Integrative Learning*. Needham Heights, MA: Allyn & Bacon

Rossman, G. & Rallis, S. (1998). *Learning in the Field: An Introduction to Qualitative Research.* Thousand Oaks, London, New Delhi: Sage Publications.

Scribner, S. (1984). *Literacy in Three Metaphors. American Journal of Education*, 93:6-21.

Scribner, S. and Cole, M. (1981). *The Psychology of Literacy.* Cambridge: Harvard University Press.

Street, B. (1988). *Literacy in Theory and Practice.* Cambridge: Cambridge University Press.

Sylwester, R. (1993). What the Biology of the Brain Tells us about Learning. *Educational Leadership.* December 1993, January 1994.

Taylor, D. (1993). Family Literacy: Resisting Deficit Models. *TESOL Quarterly*, 27(3), 550-3.

Trawick-Smith, J. (2000). *Early Childhood Development: A Multicultural Perspective.* Second Edition. Upper Saddle River, New Jersey: Prentice-Hall, Inc.

UNDP (1996). *Human Development Report. United Nations Development Program.* New York: Oxford University Press.

U.S. Department of State, (Bureau of Western Hemisphere Affairs) (2000) *Background Notes: Bolivia.* http://www.state.gov/www/background_notes/bolivia _0500_bgn.html. [May 20, 2000].

Valsiner, J.(1989). *Child development in cultural context.* Toronto; Lewiston, N.Y: Hogrefe and Huber Publishers.

Van den Berg, H., & Schiffers, N. (1992) (Eds.). *La cosmovisión Andina.* La Paz, Bolivia: UCB/Hisbol.

Vigotski, L. (1978). Mind in Society: The Development of Higher Psychological Processes. In Trawick-Smith, J. (2000). *Early Childhood Development: A*

Multicultural Perspective. Second Edition. Upper Saddle River, New Jersey: Prentice-Hall, Inc.

Weinstein, G. (1990) Family and Intergenerational Literacy in Multilingual Families. In *Center for Applied Linguistics Journal.* Washington: DC

Woods, M. (1998). Early Childhood in Pre-school Settings. In Taylor, J. & Woods, M. (Eds.) *Early Childhood Studies*. London: Arnold Publishers.